# AIMOSHA

### A Review of the Hardware, Iron and Metal Trades.

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Brown & Sharpe Mfg. Co.'s Foundry.

The engraving on the opposite page represents a pian of the new foundry recently coupied by the Brown & Sharpe Mfg. Co., of Providence, R. I. It also shows the general environment of the premises. Although not a stove foundry, it will be found interesting and suggestive to those in the stove business. In the construction and arrangement of the building, as well as in its general equipment, no care or expense has been spared to make it the very best for the purpose. After cocupying the building, the Brown & Sharpe Mfg. Co., on phoyed Mr. Edward Kirk, the well-known expert in foundry operations, to import the premises and suggestive room. It is fitted with core benches and from the diagram.

The core room is 39 feet 6 inches by 37 financiated upon the diagram.

The core room is 39 feet 6 inches by 37 financiated upon the diagram.

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The core room is 39 feet 6 inches by 37 inspect the premises and suggestive coven, with revolving shalves for the purpose. After occupying the premises and suggestive coven, with revolving shalves for the purpose of the premises and suggestive others indicated upon the diagram.

The core room is 39 feet 6 inches by 37 inspect the premises and suggestive coven, with revolving shalves for the purpose of the inspect the premises and suggest such improvements in detail as might seem desirable. From a description prepared by Mr. Kirk the following account of the new building is taken: The walls of the building are of brick up to the window sills. From this point upward framework is used. The roof covering is slate. The portions occupied as wareroom, rattling-room, &c., shown in the diagram, are two stories in hight. Above this part the pattern and carpenter shops are located. The parts in which the annealing room, picking room and core ovens are situated are one story in hight, covered with a flat tin roof. The molding room is 265 feet in length by 55 feet in width. It is lighted by 118 windows, each 10 feet 6 inches long and 4 feet 6 inches wide. A ventilator 235 feet in length by 24 feet in width is placed at the ridge of the roof. Unlike many foundries, the windows in this building have been as carefully fitted as those in other parts of the establishment. The sashes are hung with weights, and each window is provided with a curtain on spring rollers. The 152 windows which are located in the ventilator just mentioned are hung on pivots, and are operated by iron rods in sets in the ventilator just mentioned are hung on in the ventuator just mentioned are hung on pivots, and are operated by iron rods in sets of five. The inside of the roof and venti-lator is lined with narrow matched ceiling boards. The brick and woodwork of the

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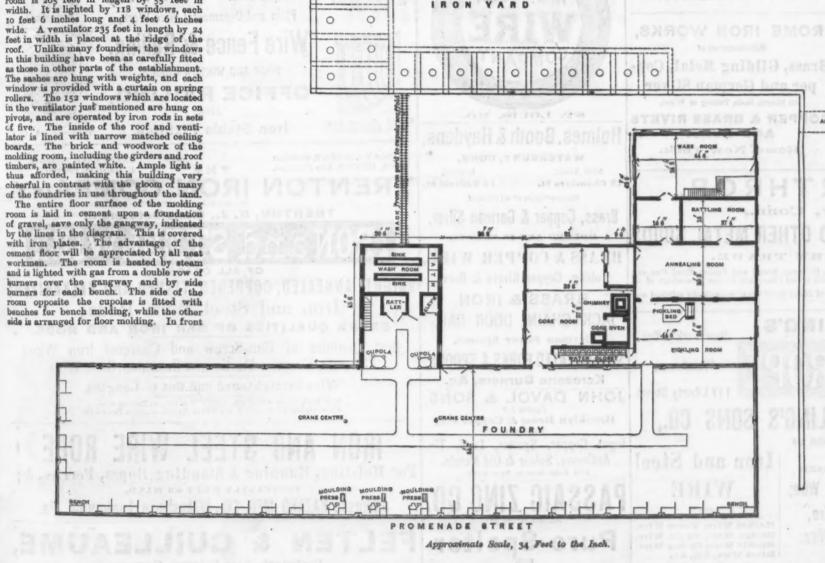
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conferred upon its representatives; but they conferred upon its representatives; but they are, nevertheless, the trustees for the stockholders. The general powers of the directors authorized them to conduct the ordinary business operations of the corporation, but not to effect a fundamental or organic change. The change proposed is not organic, but it is thorough and fundamental, as it affects the administration of the affairs of the company. It involves a withdrawal from the control It involves a withdrawal from the control and management of the stockholders of the and management of the stockholders of the entire property of the corporation for at least five years; it will preclude for a like period the exercise by the stockholders of their judgments as to the particular character and method of conducting the business affairs of the corporation, and it denies to the stockholders any right of suggestion or disapproval of the conditions when such a relinquishment of important faculties may be conceded. Surely, a power which will be attended by Surely, a power which will be attended by such consequences does not relate "to the ordinary business transactions," nor "to the orderly and proper administration of the affairs of the company," and hence cannot be exercised by the directors without express authority given to them.—Bradstreet's.

The project of building a pneumatic railway under London has been revived, and the present Parliament will soon be asked to the present Parliament will soon be asked to grant the necessary privileges for its con-struction. Its course will lie midway be-tween the existing underground roads, and its length on the main line will be 6% miles, its direction being from the far West End eastward through Oxford street, Holborn and Cheapside. A process of tunneling will

Tin Plate, Pig

Wina.



PLAN OF THE FOUNDRY OF THE EROWN & SHARPS MANUFACTURING COMPANY, PROVIDENCE, R. L.

executed by the company makes this precau-

tion with patterns very necessary.

The cupola room, which is on one side of the molding room, mear the center of the shop, is 24 by 26 feet in size. In the front shop, is 24 by 26 feet in size. In the front of this room and on the edge of the molding room stand two cupolas of the Mackenzie pattern, being a No. 2 and a No. 4. Back of the cupolas, as indicated in the sketch, are the water tanks, a stairway, cinder mill, elevator and entrance to the molders' washing and dressing rooms. Above the cupola room is the scaffold, which is 24 by 26 feet in size. The floor of this is of heavy boiler plate. The scaffold is provided with two scales for weighing stock. A No. 4½ Baker blower for supplying the blast, and the machinery for the elevator, are also located here. The elevator noted on the diagram is for conveying castings,

all times in perfect order.

The pickling or cleaning room is 44 by 24 feet. In this room two large pickling beds lined with sheet lead are placed, and at one end is a bench for chipping and finishing heavy castings. Next to this room is the annealing room, 54 feet long by 24 feet in width. Four small annealing ovens for use in light casting are employed. Next to the annealing room is the rattling or mill room, 16 by 27 feet in size. This room is furnished with four tumbling mills for cleaning and polishing castings after they have been might an extended and everything is done with perfect regularity. No castings are made without a written order from the foreman of the different departments requiring them. These orders are all kept on file, and are recorded in the casting book. When castings are furnished, they are checked off with a memoranda of the date delivered, thus preventing all disputes about parts which are broken or lost. Everything moves without that 'hurrah boy' style noticed in many foundries."

The cupolas are under the supervision of Mr. Finney, as a very ling is done with perfect regularity. No castings are made without a written order from the foreman of the different departments requiring them. These orders are all kept on file, and are recorded in the casting book. When castings are furnished, they are checked off with a memoranda of the date delivered, thus prefect regularity. No castings are made without a written order from the foreman of the different departments requiring them.

of the cupolas are two large cranes for heavy work, the centers of which appear in the engraving. Near the middle of the engraving. Near the middle of the room are placed two large fire-proof safes, in which valuable small patterns are placed as soon as the molder is through with his day's work. The character of much of the work work. The character of much of the work with sheet lead are placed, and at one are cuted by the company makes this precauting with settle entering the content of the company makes this precauting with settle entering with the content of the supplied with water from a large iron tank overhead. As a part of the system at time stablishment, these closets are the pressure was 10 cunces; at 5.42, 12 cunces and fixtures. The best patterns, flasks and fixtures. The the pressure was 10 cunces; at 5.42, 12 cunces; at 5.42, 12 cunces and at 5.45 the bottom was dropped. The infact, into the London clay, which would require a depth of about 50 feet beneath perfect regularity. No castings are made without a written order from the foreman was caused by the separation with sheet lead are placed, and at one the speed of blower."

The date of the systematized and scrubbed and are at all times in perfect order.

The pressure increased to 8 cunces. At 4.30 the pressure was 10 cunces; at 5.42, 12 cunces and everything is done with perfect regularity. No castings are made to created pressure of blast was caused by the company of the cupola and not by increasing the speed of blower."

The beautiful valuable and are supplied with water from a large interest of the system at the pressure increased to 8 cunces. At 4.30 the pressure increased to 8 cunces. The the pressure was 10 cunces; at 5.42, 12 cunces and in fact, into the London clay, which would require a depth of about 5.30, 14 cunces; at 5.42, 12 cunces and in fact, into the London

#### Officers of Corporations and Their Powers.

lack of the cupolas, as indicated in the actions of the cupolas as indicated in the states, a stairway, sinder mill, elevator and atrance to the modderd washing and dressing rooms. Above the cupola size they have been been been composed to the cupolas and dressing rooms. Above the cupola size of the cupolas are under the supervision of the cupolas and dressing rooms. Above the cupola size of the forest in this connection, we have been by 26 feet in size. The floor of this is of heavy bolief been composed for two scales for weighing stock. A conveying castings, and two scales for weighing stock. A conveying castings, and the machinery for the elevator noted to an interval of the cupolas and the machinery for the elevator noted that two floors, and is at presents and all content here. The elevator noted the heavy solid the state of the foreman and a clerk. Next to his, as will be seen by the engraving; is attain two floors, and is at presents and though this is not the plan which will be purned, when the improvements are fully sometived. Our engraving represents a training from the cupolas action, and the wild that the same point being 29 inches. The height 2 inches above the further two floors, and is at presents a training from the cupolas and the voil to be purned, when the improvements are fully sometived. Our engraving represents a training from the cupolas at the point being from the cupolas at the same point 39 inches. The length 2 inches above the two floors, and is at present and the value of the cupola and th

face would take place, except where stations are to be built. Rarely would it be necessary to encroach on land belonging to private persons, the aim being to follow a line directly A company was incorporated to "manufacture iron or steel, or both, or any other metal, or any article from metal or wood, or both," and a majority of the board of directors in December, 1881, had determined, before the annual election, which would be held on January 19, 1882, and against the protest of one of the stockholders, who held and owned a majority of the stock, to lease the whole property of the company for at least five years, and giving an option Metals.

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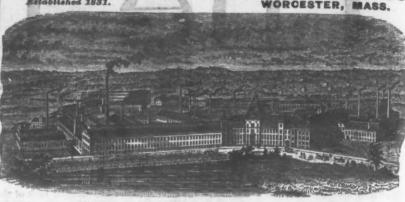
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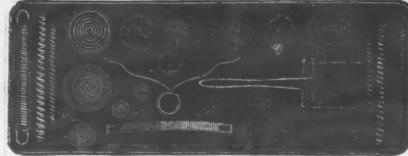
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Iron on the Pacific Coast.

The San Francisco Commercial Herald, in its annual review of business on the Pacific

Coast, has the following:
The States of California, Oregon and Wash ington Territory have begun to feed this market freely from their inexhaustible mines.

To illustrate this, we remark that the Placer County mine of the Clipper Gap. Furnaces yielded 4260 tons pig iron last year; they have now on hand about 1900 tons.

The furnaces are now temporarily closed.

As we are likely to draw heavily more Placer County mine of the Clipper Gap Furnaces yielded 4260 tons pig iron last year; they have now on hand about 1900 tons. The furnaces are now temporarily closed. They will recommence melting in April next. They calculate their output in 1882 will average 300 tons monthly. The reported sale of the Oswego Furnaces to Henry Villard and his associates has not been confirmed. They figure their monthly yield for 1882 at 500 tons per month. They have a local sale for fully one-quarter of their production. J. W. Harrison's annual circular is a condensed review of the pig iron market of California for many localities within their territory, and Harrison's annual circular is a condensed review of the pig iron market of California for the past six years, classifying each year's consumption, stock, importations, &c., under separate headings, to facilitate the calculation of the relative bearings of each year. The past year has not been a vary profitable one to importers, partially because the quantity imported has been so much less than preceding years, and partially because the selling price has favored the buyers during the first eight months of the year. The price of Glengarnock in January, 1881, was \$27 @ first eight months of the year. The price of Glengarnock in January, 1881, was \$27 @ \$28; from April to August it ruled from \$25 @ \$26; and in September it advanced to \$28; now it is held at \$30, spot, and \$26.50 present loading. It would appear singular that the quantity of foreign iron imported should be so light, in view of the consumption height grades. tion being so large—nearly 3500 tons over that of 1880. Still this is explained by the fact that the Clipper Gap Furnaces in Placer County, and the Oswego Company's furnaces County, and the Oswego Company's furnaces in Oregon combined, were expected to yield more than the consumption of California, which had averaged 14,400 tons per annum for the preceding five years. In addition to this we commenced the year 1881 with nearly 15,000 tons on hand; so importers, for-prudential reasons, withheld ordering. It having been since ascertained that a certain mannity of soft Scotch is absolutely required. quantity of soft Scotch is absolutely required to mix with our local product, orders have been more freely given, and there is at this date more Scotch iron on route than at this time, and is operated by California capital. A furnace has been erected and some work done, but no figures have been date more Scotch iron on route than at this time, and is operated by California capital. A furnace has been erected and some work done, but no figures have been date more Scotch iron on route than at this time, and is operated by California capital. A furnace has been erected and some work done, but no figures have been ascertained as to the amount. The Oswego Iron Works have been established since 1866,

is manufactured into pig. The immense iron beds owned by J. B. Potter, Avery, Governor Stanford and others, and situated near the McCloud River at the sight of the old Silverthorn bridge, and secured by Government title, are extensive enough to justify the em-ployment of heavy capital in working them. Iron Mountain is known to contain countless

of this valuable metal are known to exist in many localities within their territory, and this fact, coupled with those of ample transportation facilities by water and rail, vast mines of coal for coke and fuel, and forests of timber for charcoal, must eventually cause the establishment of furnaces and manufactories; in large numbers as score as they be a second to the content of the establishment of furnaces and manufactories in large numbers as soon as they become known. There are few localities so abundantly favored by nature for the profitable development of this industry, and that it will in time become a field in which thousands of busy hands and millions of capital will be employed, is doubted by no one at all acquainted with the mineral wealth of this section of the Pacific coast. All baser metals are compelled to remain undeveloped where gold and silver are to be developed where gold and silver are to be found, until either a population that is per-manent have established themselves, or the richer metals have been comparatively exricher metals have been comparatively exhausted. Then these deposited minerals will receive the attention they deserve, and not till then. Although several important deposits are known to exist in Oregon and Washington, but two companies are doing anything in the way of developing them. These are the Oswego Iron Works, located seven miles south of Portland, and the Irondale Iron Works, near Port Townsend, W. T. The latter has been established but a short time, and is operated by California.

other and	) Out 1		. 21 02 11 02 03		mod minos 1000,
Year.	Lowest and Highest Prices.	Stock, Jan, z.	Consumption.	Importations.	Affoat Dec. 31.
1876.	Per Ton. \$31.00 @ \$34.00	Tons. White 2,104 Soft 9,446	Tons. White 2,820 Soft16,499	Tons. white s,631 Foft 20,594	Tons.
1877.	\$38.00 <b>@</b> \$32.50	White 1,915 Soft13,541 Total15,456	White 2,073 Soft23,490 Total25,563	White 3,355 Soft	andraiming as a 19,400 series
1878.	\$25.50 <b>@</b> \$31.00	White 3,197 Soft14,168 Total17,365	White 2,509 Soft11,533 Total14,042	White 1,705 Soft 9,349 Total 11,047	8,600
1879.	\$14.00 \$34.00	White \$,393 Soft	White 870 Soft10,426 Total11,296	White 428 Soft 8,93x Total 9,359	2,308
z88o,	\$66.00 @ \$38.00	White	White 976 Soft20,773 Total11,749	White 840 Soft	a,086
188z.	\$24.50 @ \$30.00	White 315 Soft 7,960 Total 8,275	White 1,650 Soft13,528 Total 15,187	White 300 Soft 8,300 Total 8,600	*,877
Average for the past six years.	(mg.87%	White 1,933 Soft11,713 Total13,646	White 1,818 Soft12,708	White 1,543 Soft19,274 Total13,817	<b>2,735</b>

pulverizing. Tested thoroughly and guaranteed to yield a greater product of pulverized material of equal fineness in a given time with less wear, less power, less first cost and less cost for repairs than stamps or any other pulverizer.

near Michigan Bluff, about 100 tons are out awaiting the wagons to haul it down. Some rich deposits have been opened up on Slate Creek, two miles southwest of Georgetown, in El Dorado county, and hauling from there was commenced last Tuesday. The Major tion, taking into consideration the product of pulverized material of equal fineness in a given time awaiting the wagons to haul it down. Some facture into various articles of utility. Creek, two miles southwest of Georgetown, in El Dorado county, and hauling from there was commenced last Tuesday. The Major tion, taking into consideration the product of pulverized material of equal fineness in a given time awaiting the wagons to haul it down. Some facture into various articles of utility. was commenced last Tuesday. The Major hopes to send off at least 500 tons before the winter rains shall render the roads impass-able for loaded teams. He has been shipping

resources of this State none has been so entirely overlooked and neglected as the iron interests. It was not until recently that the least attention was paid to the subject, and even now, outside of a few local papers and one or two of the San Francisco dailies, the matter is not mentioned. Public attention, even in the counties where valuable deposits of iron are known to exist, has not attracted that investment of capital necessary to the development of the wines. Notwithstanding

The present stock on hand consists of 315 tons white iron, and 7960 tons soft iron (4520 tons in importers', and 3440 in foundrymen's hands), in all \$275 tons, of which 3235 tons are Scotch, 400 Oregon, 1920 Clipper Gap, 580 Salisbury and 1825 varied New York brands.

The Placer Herald has this to say about chrome iron: "We learn from Major Heuston, who has charge of the chrome mining now being carried on in this county, that they find the chrome iron belt very extensive. It crosses Placer, and on South into El Dorado, and then traces of it are found nearly to the Southern extremity of the State. He has already shipped 80 tons from Anburn depot to Boston, and has over 30 tons ready to be forwarded. At the mines, near Michigan Huff, about 100 tons are out awaiting the wagons to haul it down. Some rich deposits have been opened up on Slate (Creek two miles continued and California foundries for manufich deposits have been opened up on Slate (Creek two miles continued and California foundries for manufich the tone is carried by a train of six cars, each capable of holding five tone. The mine is well developed by tunnels, that and inclines, and yields an abundance of ore. The dangers arising from choke damp and other vitiated air are obviated by a hot-air furnace, pipes from which lead through all the galleries and afford a pure atmosphere to the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematite of an excellent variety, and yields 40 per cent. The ore of the mine is brown hematic of an excellent variety and yields 40 per cent. Th estimated that there is now in sight ore enough to last 50 years at the least calculation, taking into consideration the prospective growth of the country and consequent demand for pig iron. The limestone used as a flux in the furnace comes from Washingable for leaded teams. He has been shipping a flux in the furnace comes from Washingaround the Horn, but to intercept the supply from England, which country has heretofore controlled the trade in this commodity, the next shipment will be sent by way of the Isthmus. The indications are that chrome mining in this county will soon become a very important industry."

The Shasta Courier has this item about the iron ores of Shasta: "Of all the undeveloped resources of this State none has been so entirely overlooked and neglected as the iron past summer, and are now busy turning out of iron are known to exist, has not attracted that investment of capital necessary to the development of the mines. Notwithstanding this indifference regarding what is sure to be one of the leading interests of the State in the near future, at least four of the mountain counties contain deposits of iron equal in quality to the richest ores of Pennsylvania and New York—Calaveras, Tuolumne, Placer and Shasta. In relation to the supply we cannot speak with any certainty as to other counties, but in Shasta all the indications lead to the belief that it is inexhaustible. Shasta alone, of the counties known to contain ron, produces the black oxide, or what is more popularly known as the magnetic ore; deposits in the others consist wholly of the hydrated oxide of iron, a quality of ore usually called brown hematite. The difference between the ores is that the magnetic is richer, and is usually made directly into wrought iron in forges, while the hematite

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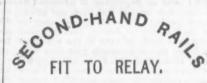
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above. The company own several thousand acres of land, and have an ample fluid for acres or land, and have an ample fluid for any amount of development they may choose to undertake. The closs proximity of their plant to a market and high value of the ore produced will give it an advantage over fu-ture works, and it will probably be the loca-cation of a number of extensive suburban iron industries within a very few years. Some time are the company constructed as Some time ago the company constructed a canal from the Tualatin River to Sucker Lake, a distance of two miles, but notwithstanding the excellent water supply, the company intend to run the new air blast next year with steam power. There are several other iron beds in Oregon. Columbia several other fron beds in Oregon. Columba County is known to contain extensive deposits of ore of excellent quality, and other sections have shown traces which, when followed up, will doubtless result in the development of large beds. The entire region west of the Cascades, both in Oregon and Washington, indicate the presence of iron and coal in large quantities. The mineral wealth of the region east of the Cascades is little known, but it is probable that iron will little known, but it is probable that iron will be found there in as ample quantity as in other portions of the Northwest. The great undeveloped section of Southeastern Oregon is said to be full of mineral wealth, and traces of iron are observable in many portions of northern Grant County and the western portion of Baker. The bog iron beds of Thurston and Pierce Counties, of Washington Territory, are well known, and will probably be the next deposits developed. With the extensive improvements now being car-ried on by the great corporations established in the last year or two, this is only a question of time, which cannot be but brief.

changes were again made, as mentioned

Annual Product of Quicksilver.

The total production of quicksilver on the Pacific Coast in 1881 was 58,635 flasks, against 59,453 flasks in the previous year, and the exports by sea in 1881 amounted to 35,269 flasks, valued at \$1,027,508. About 17,000 went to China in the year just expired, and 15,141 were exported to Mexico. The San Francisco World remarks as follows:

The production during 1881 has not materially varied compared with former years.

ally varied, compared with former years, neither in California nor in Europe, say about 60,000 flasks here and 50,000 in Europe. Stocks here are moderate, it being rope. Stocks here are moderate, it being the policy of our producers generally to meet the demand under reasonable restrictions. Probably our whole available stock is about 5000 flasks, while in London it was 84,000 on the 23d day of last November, according to the statement of the agents of the Almaden Mine (Spain), the Rothschilds, they holding 13,000 bottles and speculators 71,000 bottles. It is safe to say that this large quantity has all accumulated during the past six or seven years, and 10,000 to 20,000 flasks are now being added yearly, which will give in London by the close of the present year 100,000 flasks or over. Prices during will give in London by the close of the present year 100,000 flasks or over. Prices during the year were tolerably steady at 37 cents to 38 cents, except on about the 26th of September, when advices came from London of a sharp advance there from £6. 5/ to £6. 10/ per bottle, and a few days later to £6. 17/6 to £7. The price here was advanced and carcarried as high as 42 cents per pound at carried as high as 42 cents per pound, at which sales were reported. It is, however, to be noted that considerable quantities were taken by speculators, they paying from 37 cents to 39 cents per pound. Subsequently the price declined in London, and when the semi-official statement was made of stocks semi-official statement was made of stocks there on the 23d of November, the market fairly collapsed and £0. 5/ to £6. 2/6 per flask was the asking price, less 3 per cent. Hence the price dropped to the old figures. With an average production, both here and in Europe, it is difficult to see how prices can be permanently advanced, unless new uses can be found for the article or valuable bodies of silver-bearing ore be discovered involving large consumption. As with silver volving large consumption. As with silver product, doubtless China would take all offor that country, both in silver and mescury, are largely made as a means of investing surplus wealth—another term for speculation.

—no permanent relief would follow in the matter of stocks of this article, and any advance in prices would be, at the best, only spasmodic. The producer here can hardly be expected, after selling as moderate figures, as hold his stock out of the market and aid the London speculators to work off their large steck at high figures. All indications with the steadings in price and moderate point to steadiness in price and moderate figures.

The Overland and Cape Hern Routes. The Gyrer and and Cape Hern Routes.

—Traffic between the Atlantic seaboard and the Pacific States continues rapidly to increase. San Francisco papers have been furnished with a statement of the gross weight of commercial freight transported over the Central Pacific Railroad and leased lines, both East and West, as well as locally, during the nest two works.

turing the past two years, as follows:

1830.—Lbs.
1837.—Lbs.
1837.—Lbs.
237,589,200
255,005,100
Local 2,862,221,300
3,721,38(,960

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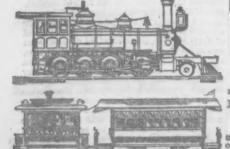
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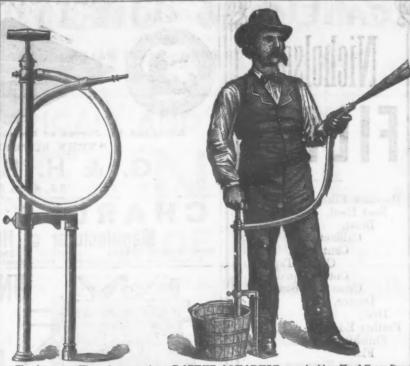
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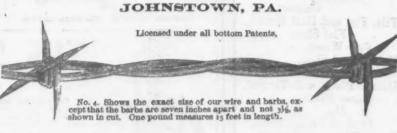
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fifty-six vessels destined to California, sent around in 1880, amounting to 90,911 tons.
Contrary to expectations, the opening of new railway routes overland through the Southwest, serve to increase rather than diminish the amount of merchandise trans-

#### Tests of Metals.

The following is a report of the Committee on Tests, recently made to the Society of Engineers of Western Pennsylvania:

Sir: The Committee on Tests, in the absence of any original work which it is able to lay before the society, begs leave to submit the following statement of the affairs of the United States Commission for the testing of iron, steel and other metals.

In the year 1875, through the exertions of

In the year 1875, through the exertions of the American Society of Civil Engineers, the American Institute of Mining Engineers, the American Iron and Steel Association, had built, but the use of which it never enjoyed. Even before its completion the funds of the Commission gave out, and all efforts to obtain additional appropriations from Congress proved futile, except so much as was necessary to pay for the machine. After its completion it passed into the hands of the Ordnance Department of the Army, and by law of Congress was made available to private individuals for purposes of tests on payment of costs. Extensive use has been made of this privilege, and the department has ment of costs. Extensive use has been made of this privilege, and the department has also been able to make a limited number of tests on its own account. Among these are the tests on lined and unlined cast-iron cylinders subjected to internal pressure, copies of a report on which was furnished the society through the kindness of Colonel Laidley, U. S. A., commanding Watertown Arsenal. Altogether a considerable number of tests have been made, and much information of value could no doubt be gathered from them, but very little has been published, and they as yet await the hand of some one who will

Technical Schools for Artisans .the textile arts was presented at the annual meeting of the Textile Manufacturers' Association in Philadelphia, on the 31st ult. A year ago the organization decided to raise a fund for the establishment of a school of instruction, and since that time strong efforts have hear put forth to secure a sun of \$25. have been put forth to secure a sum of \$25,000 for this purpose. Only \$20,400, however, has thus far been subscribed, and in deploring the apathy which exists concerning deploring the apathy which exists concerning the subject, the report sketched the progress of technical education in Europe, and warned the listening manufacturers that in view of the action now being taken to place the workmen of Europe in a position to compete with other countries, it behooved them to awaken from their dream of fancied security and provide a system of practical education. The association directed that the report be printed for general distribution, and also resolved to call a rublic meeting at an early date in supfor general distribution, and also resolved to call a public meeting at an early date in support of the movement. The report of the Treasurer showed that the receipts for the year had been \$4253, and the expenditure \$3686. It was stated that the project of establishing an exchange for the sale of wools and yarns had not proved satisfactory, but that the textile trade was steadily improving and that the output for the coming year would exceed that of any previous one. James Dolan was re-elected president, Wm. Arrott treasurer, and W. T. Seal secretary. The old Board of Managers was also re-elected.

Hawaiian Export Trade.-Following an official statement of the quantities of leading staples exported from the Hawaiian Isl

,	ands during the past two years:
	1881. 1882.
	Sugar, pounds63,584,900 92,393,000
	Molasses, gallons 198,400 sor,300
	Paddy, pounds 102,400 Rice
)	Rice
9	Wool 381,300 , 528,500
	The total value of all the domestic exports
	from the Hawaiian Islands for 1881 was
	\$6,530,300, against \$4,796.400 in 1880, an
	increase of \$1,733,900. The value last year
1	is decidedly the largest in the history of the
	islands. This increased business is directly
	due to the reciprocity treaty. Of the sugar
1	exported last year, 1,594,400 pounds was
1	from Hilo, 9,781,800 pounds from Kahului
d	and 8r or6 oog nounds from Honolulu

#### Lightning Conductors.

From the report of the Lightning-rod Conference recently held in England some useful hints may be gleaned. The rod at its summit, it appears, should be simply beveled, so that the full conducting power of the rod may be ready to receive a disruptive discharge, while at about a foot below the extreme top there should be firmly attached by screws and solder a copper ring carrying three or four copper needles six inches long, and tapering from ¼ inch to as fine a point as can be made—the points to be platinized, gilded or niokel-plated. These points are to induce the silent discharge, and thus, as it were, to prevent the difference between the electric potential of the cloud and the earth reaching such an amount as to cause the passage of a spark. Vanes, finials cause the passage of a spark. Vanes, finials and all pieces of metal work on the upper portions of edifices should be in metallic conthe American Institute of Mining Engineers, the American Iron and Steel Association, and other scientific bodies, Congress created a commission to test iron, steel and other metals, and appropriated a sum of money for this purpose. The commission was composed of one engineer officer of the army, one officer of the Ordnance Department, two of the navy and three civil engineers, and began its labors very auspiciously. A number of tests were made in the Government testing machine at the Navy Yard in Washington, chiefly on chain cables, and a report was published, a copy of which is in possession of the library of the society. The chief fruit of the labors of the commission, however, is represented by the admirable testing machine at the Watertown Arsenal which it had built, but the use of which it never enjoyed. Even before its completion the funds of the Commission gave out, and all efforts. imbedding the ends in a mass of solder finds most favor with the delegates. Of earth-plates, the report recommends that they should always be of the same metal as the rod, should have a surface of not less than 18 square feet (i. e. 9 on each side); and should be placed either in a well or in a hole so deep that the earth will never be dry. The plate need not be notched at the edges, but it should be covered with coke. Where it is impossible to find a perpetually moist earth, three or four hundred weight of iron should be buried at the foot of the conductor, and the hele filled up with coke when the earthplate has been lowered in. To secure the moist state of the earth, rain water pipes the moist state of the earth, rain water pipes should be led so as to discharge over the

#### Color Relations of Metals.

Altogether a considerable number of tests have been made, and much information of value could no doubt be gathered from them, but very little has been published, and they as yet await the hand of some one who will work out the results systematically and give proper interpretation to them.

Your committee is happy to state that active steps have been taken by the American Society of Civil Engineers, aided by other societies, in effecting a reappointment of a commission and securing an appropriation from Congress. At the meeting of the American Institute of Mining Engineers in Washington next month, a united effort will be made to interest members of Congress in the subject and obtain favorable action during the present session of Congress. It is expected that the new commission will be placed on a better basis than its predecessor, that its powers will be greater, and that certain errors of organization which impaired the usefulness of the former commission will be avoided. There is every prospect that these efforts will meet with success, and the near future will see this, the most promising movement made in many years toward advancing our engineering knowledge, again under way and accomplishing results.

The committee regrets that one of its members, Mr. Kent, has been seriously ill for several months, and still continues so, in consequence of which his signature does not appear.

Respectfully submitted,

C. L. Stroßell,

J. W. WALKER,

Members Committee on Tests.

The committee regrets that one of its members, and still continues so, in consequence of which his signature does not appear.

Respectfully submitted,

J. W. WALKER,

Members Committee on Tests.

solutions which can be exactly similated by a mixture of iron and copper solutions; but this mixture contains more iron than that which is complementary to cobalt. Nickel solutions are almost complementary to cobalt solutions, but they transmit an excess of yellow light. Now, the atomic weight of nickel is very nearly the mean of the atomic weight of iron and copper, but it is a little lower—that is, nearer to iron. There is thus a perfect analogy between the atomic weights and the color properties in this case. This and the color properties in this case. This analogy is even more general, for Mr. Bayley states that in the case of iron, cobalt and copper, the mean wave length of the light absorbed is proportional to the atomic weight. The specific chromatic power increases with the affinity of the metal for oxygen. Chromium forms three kinds of salts—pink salts identical in color with the cabalt salts. salts, identical in color with the cobalt salts : salts, identical in color with the colors salts; blue salts, identical in color with copper salts; and green salts, complementary to the red salts. Manganese, in like manner, forms more than one kind of salt. The red salts of manganese are identical in color with the co-balt salts and with the red chromium salts.

Furnaces.	Dec. 31.	Sept. 30.	June 30.	Mar. 31.
Built	949	946	95x	954
In blast	552	548	54s	575

Bradstreet's reports state that it is said that the New York syndicate who hold the option to buy the stock of the Siemens-Anderson Steel Company, have made a proposition to the Merchants' and Manufacturers' Bank of Pittaburgh, as the chief creditor, to furnish money to operate the works. To secure the unsecured creditors, it is proposed to issue \$250,000 preferred stock at 6 per cent., the present mortgages to stand as they are, and secured creditors to hold on to their collateral and not use any force until the expiration of time agreed upon. There is said piration of time agreed upon. There is said to be an action pending to have the proceeds of the sale of the works paid into court and divided among the creditors pro rata.

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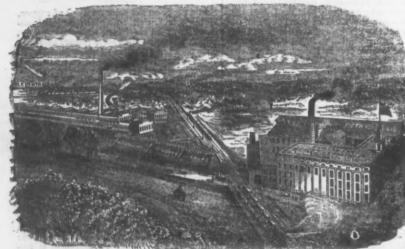
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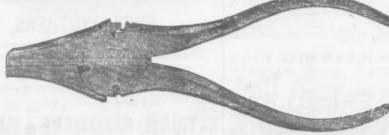
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And Every Variety of Small Nails.

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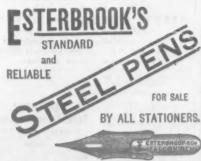
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Windsor Richards on the English and American Steel Trades.

At the recent annual dinner of the Cleveland Institution of Engineers, England, Mr. E. Windsor Richards, president of the institution, made the following remarks:

molten metal being taken direct from the Cleveland and South Bank blast furnaces. The output of Cleveland steel by the Thomas-Gilchrist process at present exceeds 2100 tons per week from two pits. When it is remembered that such an output of ingots from hematite pig iron was only a few years ago considered fairly good work, it may be considered that the proposes work it considered that the progress made is worthy of record. Improvements are now on hand which will shortly increase the production from two pits to 3000 tons weekly. The prejudice which very naturally existed against this steel is becoming more and more against this steel is becoming more and more lessened, and will, no doubt, in the course of a couple of years completely die away—that is, if very special care is exercised by manufacturers in its production. It must be granted that extra precautions and more skill are required in this than in the old process of Bessemer steel making. It is an absolute necessity that the analytical chemist and the practical steel maker should work together, as every cast must be analyzed in order to ensure reliable results. So expert have the Eston chemists become that they can make a phosphorus determination and can make a phosphorus determination and place the result in the steel maker's hands in an hour. The plan adopted at the outset of the process of making a small sample ingot the process of making a small sample ingot of the partially-blown metal, hammering it flat under a steam hammer, cooling it quickly in water, breaking it in two, and then judging by the fracture (guided by pre-vious analysis) whether the quality is right, and so determining whether any further and how much more blowing is required, its still found to be an excellent system. is still found to be an excellent system.

The Americans have not yet commenced making Bessemer steel from phosphoric pigiron, but are turning out enormous quantities of ordinary steel from hematite pigiron in the twenty-four converters new in operation. The average output of all the American steel works in November last was nearly 5400 tons per converter. In that month the justly celebrated works of Messrs. Carnegie Bros., managed by Capt. W. R. Jones, made 15,235 tons of ingots in two 8-ton converters with their vertical blowing engines, each engine having 42-inch steam cylinders and 56-inch air, 4-feet stroke, pressure of air 24 lbs. to 20 lbs. The men work eight-hour shifts, and at the time when I was at the works the heat was most oppressive. I saw the twentysixth blow turned up at 3 minutes to 4 o'clock in the evening, the shift having commenced at 8 in the morning and changing at 4 o'clock. Equally surprising is the output of ingots at the Bethlehem Works, managed by Mr. John Frits. In the same month the make of ingots was 15,729 tons, made up from 8-ton converters, but with only one pair of horizontal condensing blowing engines, the steam cylinder being 36 inches in diameter, and the air cylinder 48 inches, 4 feet stroke, making about forty strokes per minute. There is a strong and healthy rivalry, with perfect good feeling, at these two works. Sometimes one is ahead; then the workmen of the other house look upon it as a personal matter, and make great efforts to obtain the largest output for the next month's record. These outputs are not what are termed "brag" records, but will be maintained and menced at 8 in the morning and changing at 4 o'clock. Equally surprising is the output of ingots at the Bethlehem Works, managed "brag" records, but will be maintained and exceeded as soon as Capt. Jones has his new three 10-ton converters at work, and they may already be in operation. Mr. Fritz will not be behindhand as soon as his new large blowing engine is started. I have just received a statement of the output of ingots from the Edgar Thomson Works for the week ending December 3, 1881. As it is probably the largest quantity obtained from an Ameri-can plant of two 8-ton converters, and as this year the three 10-ton converters will be in full operation, it will be interesting to note this output for future-comparison. Commencing work on Sunday night, and finishing at 4 p. m. on Saturday, they made 496 casts, yielding 3813 tons of ingots; their best twenty-four hours' work was 700 tons. You will not all you why it is that England is so will natually ask why it is that England is so much behind in quantity? There are several reasons, but the chief one is that with such hurried work, which we term "driving," we hurried work, which we term "driving," we could not fulfill the conditions of the exacting specifications of English and Continental engineers, and so requiring more time, we are compelled to do with four converters and four sets of men what the Americans do with two converters and three sets of men. It is found in practice that 33 per cent. more men will not work the third shift, but that 50 per cent. more are required, so that it is difficult to see the economy of working with ficult to see the economy of working with such few appliances. I am of opinion that if any English firm having four converters making 3800 tons of ingots per week, stopped two of them, and worked two with three sets of men, and obtained the same output, the labor cost per ton of ingots would be quite as great with two converters as with four, leaving the matter of regularity of

an idea of what is being done in this direction on the other side of the Atlantic, a brief description of this plant may interest you. The plant consists of four blast furnaces, two of which are in operation. Each furnace is 75 feet high, 21 feet bosh and 9 feet hearth. The coke used is brought from Connellsville, near Pittsburgh, distant some 450 miles. The blast furnaces of the Chicago district were damped down at the time of my visit, owing to the inability of the railway to deal with their enormously increased traffic. The ores, limestone and coke are stacked in a fine roofed shed, 367 feet 4 inches long by 98 feet 10 inches wide. To save something in cupolas (coke being very dear in Chicago), it is intended that the molten metal shall be taken direct to the converter from the blast furnaces. So far,

in America, their attempts in this direction have failed, owing to the inequality of the metal produced. There are 14 Whitwell fire-brick stoves, 60 feet high, 31 feet diameter; 8 vertical condensing blowing engines, with 84-inch air cylinders, 36-inch steam, 54-inch stroke, 30 to 35 strokes per minute; separate condensers; 36 boilers, 4 feet diameter, 72 feet long, cut into two lengths of 36 feet, making 72 boilers 36 feet long; all placed under a roof, 248 feet long by 96 feet span. The converting house is some couple of hundred yards away from the blast furnaces, and consists of three 10-ton converters placed side by side. The blast is to be supplied by a horizontal engine having 54-inch steam and 60-inch air cylinders. The ingots are to be taken while still hot to the rolling mills, heated in for Siemens gas furnaces, then rolled in a three-high roughing train, driven by a single-cylinder engine with heavy wheel. A finishing two-high train, driven by a pair of reversing engines, is placed directly in front and about yet feet away treen the last green the During the past year very substantial progress has been made in the manufacture of Bessemer steel from Cleveland ironstone, the reversing engines, is placed directly in front and about 120 feet away from the last groove of the roughing rolls, in order that the ingot may be rolled at one heat into three 30-foot rails. This is an experiment in American practice, as in no works there do they roll more than one 30-foot length rail. The saws,

hote than one 30-100t length rail. The saws, hot benches, straightening and drilling machines, and gas producers are all in good substantial buildings, well roofed in.

There is nothing very striking in American rail-rolling practice. The rail trains are all three-high, and work well and do good work. They are driven some by vertical and some by horizontal direct active assistant. and some by horizontal direct-acting engines with cylinders from 40 to 46 inches diameter, stroke from 4 to 5 feet, with heavy fly-whee's about 30 feet diameter. The rolls are about 23-inch pitch. The blooms are about 7 inches square, and rolled in eleven passes to a simple length of 55 pounds or 60 pounds of flange rail, 30 feet long. The two saws are fixed to that distance, and cut off both ends at the same time. If there is a bad end it is afterward cut off when cold, by a disk of soft iron without teeth ¼ inch thick, driven at 2200 revolutions per minute, and will cut through a steel flange rail in 1¼ minutes. If we consider the blast-furnace practice of America generally, and converse it with America generally, and compare it with Cleveland, I have no doubt Cleveland is still in advance; but a few ironmasters, profiting by our as well as by their own experience, have effected great improvements during the last two years, particularly at Carnegie Brothers' Works, near Pittsburgh, the Cambria Iron Company, and a few others. Messrs. Carnegie Brothers have shown great foresight and enterprise in this direction. Their "C" furnace is 80 feet high, 20 feet bosh, 11 feet hearth, has eight tuyeres, 6inch nozzles, 9 pounds pillar of blast, three Cowper stoves 60 feet high, 20 feet diameter, blast 1100°. With such driving the life of the lining of the furnace must necessarily be short, probably never exceeding three years; but it is a merry life with pig iron at \$28 per

The difficulty of obtaining a solid ingot of steel, especially of soft steel, still exercises the minds of steel makers, though many are the minds of steel makers, though many are unaware of the extent of the cavities in the ingots they produce. If manufacturers would occasionally cut some ingots through the middle from end to end, they would be surprised at the results sometimes revealed. At the last meeting of the Iron and Steel Institute, Mr. W. D. Allen, of Sheffield, called attention to the action of a mechanical agitator for liberating the occluded gases in motion steel, and by his permission I saw the action of the agitator on a ladleful of molten steel. Directly the stirrer began to revolve there was a quantity of gas liberated, which burned with a bright flame. The steel was certainly very quiet in the molds. The beneficial effect of this liberation of gas is best appreciated when the steel is afterward drawn into fine wire.

The shipbuilding industry has attained

The shipbuilding industry has attained tons, as against 42,000 tons in 1850, and 18,000 tons in 1879. At the present time there are 50,000 tons of steel ships building on the Clyde. Our shipbuilding friends tell us that before steel can be very largely introduced or displace iron its price must be brought nearer to that of iron; and as Cleveland will become as large a steel making as it is now an iron making district, it behooves us is now an iron making district, it behooves us to inquire into this matter. There are two four, leaving the matter of regularity of quality of product out of the question.

There are improvements and extensions in hand and contemplated in most of the American steel works. At South Chicago, on Lake Michigan shore, a completely new plant of the most modern description is almost ready for work; and in order that you may form an idea of what is being done in this direction on the other side of the Atlantic, a brief description of this plant may interest Cutlery.

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(See From Age first issue of each month)

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Phosphor-Bronse is daily gaining favor with annufacturers who have to use a metal of great toughness and durability, of fine grain, high ten sile strength and durability, of fine grain, high ten sile strength and durability and is acknowledged far superior to any other alloy on account of the readiness with which it takes a polish, its elasticity, fluidity and beauty of color. Its high price, however, has so far prevented the use of it to so large an extent as its merit would warrant. For the first time an article is offered hisrewith which makes it easy for everybody to manufacture his own Phosphor-Bronze of the grade it is wanted, by the simple process of meliting. This article is PHOSP HOR-TIN. By melting a very small quantity of it with copper an excellent Phosphor-Bronze is obtained at a much cheaper price than the ready made Phosphor-Bronze can be had in the market. A trial ought to be made by everybody who is using it.

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gines, when the temperature of the water falls somewhat suddenly from 45° to 35°, and the chances are that at any moment the ship may ram an iceberg, there is a strong feeling of confidence engendered in being in a ship so carefully built and of such splendid material; but why an iron ship should be run under the same dangerous conditions, and built subject to no such restrictions and tests seems anomalous. It is, hewever, one substantial

The new branch railroad to run from Milo depot to Katahdin Iron Works, is in working order to Brownville village, and the work is progressing with the expectation of completing the road to the iron works in the spring. The preduction of iron at the works is fifteen or more tons per day.

sect to no such restrictions and tests seems anomalous. It is, hewever, one substantial reason why steel for ships should cost more than iron for the same purpose. The second point is that scrap shearing made from iron plates which amount to nearly 50 per cent. on the plates sent from the works, can be easily repiled and rolled into plates, at the same time improving the strength of the plate; but, it is not so with ingot metal. The steel shear scrap, reduced almost to the value is fifteen or more tons per day.

The Pattle Governor Company has been organized at Portland, for manufacturing, using and selling the Pattle steam engine governor, with a capital of \$50,000.

steel shear scrap, reduced almost to the value of pig iron, must be thrown back into the

hammering, as the hammer moves the rough scales, and cogging does not. Doubting this, I was pleased to see at the Otis Steel Works, Ohio, several Siemens' mild steel plates made

gether on the ground, and building the rings up from bottom to top, they commence with the top plates and top ring of the stove. They are first erected on the ground, and riveted and caulked complete; then, with three very large screw-jacks, having a lift of about 6 feet, and placed at equal distances round the site of the stove, worked by men with winch handles, this first ring is carefully and evenly lifted high enough to enable the workmen to put on the next ring of the

fully and evenly lifted high enough to enable the workmen to put on the next ring of the plates 5 foet high. This ring is also riveted and caulked complete: then another ring is added and lifted, and so on, till the whole stove is completed. The wrought-iron chimney, 175 feet high, for working these stoves was erected in the same way. As fire-brick stoves are becoming general, this mode of erecting them may be found economical and convenient.

convenient.

America is in a state of general prosperity; the railways along which I traveled were glutted with traffic. The iron and steel works, engineering and rolling-stock establishments were in full operation.

Just a few instances: I visited the celebrated

Baldwin Locomotive Works, in Philadelphia. One of the proprietors informed me that they were full of work up to 1883; a particular friend, who always gave them his orders, called and begged for one locomotivo. The reply was that he could have it at an advance of corper cent in price, to which there was no

there is not an ironmaster present who would

meetings, and to read short papers on engineering, metallurgical, and chemical questions, in order that discussions may arise,

iens furnace or Bessemer converter. To Siemens furnace or Bessemer converter. An reduce this cost of scrap plates of very much larger dimensions must be rolled, but to further reduce cost there must be no previous hammering, but this necessitates a large

The works of the National Horse Shoe Nail Company, at Vergennes, were burned on the afternoon of the 9th. The rolling mill and workshops were entirely destroyed. The loss is estimated at from \$20,000 to outlay on very ponderous and special ma-chinery; but with such machinery plates in steel could be rolled two or three times heavier than are now rolled in iron, and so reduce the scrap by about 50 or 75 per cent. Some steel makers assert that it is impossible to roll an ingot into a clear surface plate without first \$25,000.

The Pittsfield Iron and Steel Company, organized in 1881, at Boston, have erected and almost completed large works at Pittsand almost completed large works at Pittsfield, for the purpose of manufacturing iron
on an extensive scale. With regard to the
quality of the ore it is, according to analytical tests, especially adapted for the manufacture of the finest quality of steel. The
company are now busily engaged in putting
up eight fires for making charcoal blooms.

There have been shipped from the Taunton
Iron Works Co. during the past eight months
6320 stoves, ranges and furnaces. Orders
for several kinds of ranges are coming in
faster than they can be filled, which is a
remarkable state of business for this time of
year, when stove foundries are either stopped
or are storing all they make.

I was pleased to see at the Otis Steel Works, Ohio, several Siemens' mild steel plates made from pig and scrap rolled at one heat into clean-surface boiler plates without any previous hammering. The ingot was 24 inches wide by 9 inches thick. The ingot is well and carefully heated in a Siemens' furnace, and rolled in a three-high Lauth I mill, having 36-inch top and bottom rolls, with 20-inch center roll 9 feet 4 inches long, and making 90 revolutions per minute, driven direct by a single-cylinder Porter-Allen engine, 40 inches diameter by 4 feet stroke, with very heavy fly-wheel. To obtain clean surfaces they sweep the plate with steel-wire brushes dipped in water, and when the plate is about half-rolled numerous jets of steam are directed at an angle on to the surface of the plate, and are very effective in removing scale. In engineering matters connected with iron manufacture I noticed at the Pennsylvania Steel Works, Harrisburgh, a novel plan of erecting the casings of fire-brick, hot-air and wrought iron chimneys. Two new blast furnaces are being erected there, with six Whitwell stoves, 18 feet diameter, 60 feet high. Instead of putting the bottom plates of the stove together on the ground, and building the rings aup from bottom to top, they commence with the top plates and top ring of the stove to

year, when stove foundries are either stopped or are storing all they make.

It is said the profits of the Taunton Locomotive Company for the past year will be about double that of any former year for some time, and will equal about 75 per cent. of their capital stock. Certais it is that this establishment is turning out an immense amount of work, and also that they get nearly twice as much for a locomotive to-day as they did a year ago.

The Washburn Iron Company, at Worcester, whose work has heretofore consisted in the rerolling and preparing of old rails, have lately determined on an entirely new departure, and have about completed extensive alterations and improvements in their machinery for the nearly exclusive manufac-

atterations and improvements in their machinery for the nearly exclusive manufacture of rails from Bessemer steel blooms. There are five buildings in all, including two foundries, a rolling mill, offices and pattern shop. The new machinery for the rolling mill and foundries consists of a Corliss horisontal engine and a full 22-inch rail train of rolls, with all the processors designed. sontal engine and a full 22-inch rail train of rolls, with all the necessary details and appurtenances. The engine is about 500-horse power, with a 5-foot stroke and 34-inch cylinder. The fly-wheel is 25 feet in diameter, 15 feet face, and weighs 31 tons. It is intended to be run at the rate of 75 to 80 revolutions a minute. The engine and roller have been sunk to a depth of 17 feet. The company run 8 furnaces, with ten boilers 50 horse-power each, furnishing a capacity company run 3 furnaces, with ten boilers 50 horse-power each, furnishing a capacity for turning out 100 tons, or 450 finished rails, per day. In the heating process, as carried on here, perfect rails are secured by the use of natural draft, in place of the ordinary system of artificial blowing, the heat in this case being permitted to enter the whole of the metal at once, instead of furnishing a greater heat for the outer surface. The company have lately added to face. The company have lately added to their facilities in the matter of illumination by placing in their rolling mill one of Fuller's three-light electric machines. The new train of rolls is from the works of the Birmingham called and begged for one locomotive. The reply was that he could have it at an advance of 50 per cent in price, to which there was no demur, but it was a question of quick delivery this one extra engine till June, 1882, although this firm turned out 11 locomotives per week. At the South Chicago new steel works the reversing rolling-mill engines were to have been delivered last March, but there was the Warth will be made the register of the rails to be manufactured by the Washburn Iron Company will be 30 feet the Washburn Iron Company will be 30 feet the Washburn Iron Company will be 30 feet.

one extra engine till June, 1882, although this firm turned out 11 locomotives per week. At the South Chicago new steel works the company will be fully supplied with all the requisites for their business and prepared to fill orders. The standard probe the life of the year. At the new steel works at Scranton the cogging and rolling-mill engines are being made in England by Davy Brothers, of Sheffield. There is nothing more unsatisfactory to Americans than to be obliged to send out of the country for anything. The secretary of one of the leading iron associations told me that, though they could easily raise their prices all round if they choose to do so, they would not for fear of letting in foreign iron. Now, many of us no doubt think and say what a sad thing this protection is for the general good, and, though we may all be sound free traders, there is not an ironmaster present who would not found ready sale and demand far between the stores at the protections. More recently they would not for research who would not found ready sale and demand far between the stores and propagate to fill orders. The standard proportion of the rails to be manufactured by the Washburn Iron Company will be 30 feet long and 60 pounds to the yard, although the washburn Iron Company will be 30 feet long and 60 pounds to the yard, although the works in the spring. The being make in England by Davy Brothers, of the send out of the country for anything. The secretary of one of the leading iron associations told me that, though they could easily raise their prices all round if they choose to do so, they would not for fear of letting in foreign iron. Now, many of us no doubt think and say what a sad thing this protection is for the general good, and, though we may all be sound free traders, there is not an ironmaster present who would not found ready sale and demand far bearing out the protection is for the general good, and, though we may all be sound free traders, there is not an ironmaster present who would not found ready sale and dem The Greenfield Tool Company, Greenfield, was incorporated under the laws of the State of Massachusetts, in the year 1851, for the purpose of manufacturing joiners' bench and molding planes in every variety. In this branch of manufacturing they were very successful. A few years ago they began manufacturing ox shoes with patent dies, which found ready sale and demand far beyond their expectations. More recently they added table cutlery to their product, and in this they also succeeded in gaining a reputation for superior workmanship. In August not instantly become a stanch protectionist if his works could be transplanted to American soil. From all I have been able to gather tion for superior workmanhip. In August last the management changed hands, Mr. A. Alford, who for the past fourteen years has been connected with the extensive manufacturing corporation of E. Remington & Sons, New York, becoming its president, with a good year's trade for America is assured; and I believe in spite of all their best efforts—and great efforts are being made to supand great efforts are being made to supply their own wants—they must have some Cleveland pig iron and hematite Bessemer iron. They cannot do without it.

With the certain prospect of at least one year's better trade, I sincerely trust that the good relations now established between employers and employed in Cleveland will be maintained, and that the agreements made for carrying on uninterrupted work will be loyally and honestly carried out, so that both may reap the benefit of improved trade, and be to some extent recompensed for the miseries of a long period of trade depression; and that should disputes from any cause arise in this district, the old, cruel and barbarous system of settling them by strikes and lock-outs may be found to have become things of the past, and that common sense and reason will prevail. Finally, I appeal to the Cleveland engineers to forward the interests of their institute by a better attendance at its meetings, and to read short papers on engineers weetslurcical, and ohemical questions.

PENNSYLVANIA.

tions, in order that discussions may arise, and so give life and interest to our proceed-and the establishment is pushed to its utmost

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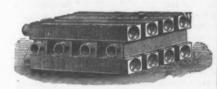
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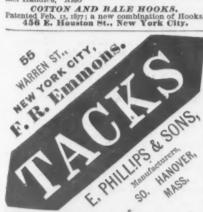
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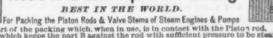
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capacity to turn out all the work on hand. The Lyman-Haskell gun is still undergoing the process of boring at the "rate of three-quarters of an inch as hour, and the work is being done day and night. The first bore is 9 inches in diameter, and such is the accuracy with which it is done that after it had been gut to the dorth of a fort inches the curacy with which it is done that after it had been cut to the depth of 4 feet 7 inches the drill was 1-32 inch out of plumb. The boring is being done with four cutters and a drill. Four vertical engines have also just been completed at the Scott Foundry, and two of them have been shipped away to the parties for whom they were made. They each have a ro-inch store and a zz-inch stroke. A horizontal engine, with a slide valve, and A horizontal engine, with a slide valve, and having a 25-inch bore and 48-inch stroke, has just been turned out for Joseph L. Bailey & Co., at the Pine Iron Works. One rotary shears, and a pair of muck-bar shears have just been finished and shipped to the York Rolling Mill. There are also three cotton presses under way.

The entire 200 ovens of the Connells-ville Gas Coal Company are now in opera-tion, and the company are shipping twenty-five cars of coke per day, employing 140 men. The entire plant of the company con-templates 400 ovens. The present number will be increased by seventy-five more in the

spring.
The West Hamburg Iron Works are making important improvements. The lessees, Messrs. Nevegold, Scheide & Co., are erecting several new furnaces, and contemplate purchasing a squeezer. It is also stated that the company will arrange to resume the manufacture of merchant bar iron, which portion of the works have been laying idle e last September.

The old locomotive works in New Haven pposite Connellsville, which have lain idle opposite Connellsville, which have lain idle for several years, are expected to restart in the near future. The real estate is owned by the National Bank of Commerce of Pitteburgh, and part of the machinery by E. K. Hyndman and others. The gentlemen about to purchase all reside in Pittsburgh.

Maidencreek Furnace is almost in repair again, and will probably blow in the latter part of this week.

The Scottdale Tribune of last week says:

"One of the hot-blast furnaces at Charlotte

One of the hot-blast furnaces at Charlotte furnace is being overhauled and repaired this week. It will require two or three weeks to put it in working order. In the mean-time the other furnaces will perform the duty of this one in addition to their own, and a stoppage of the furnace will not be

The Lehigh Zinc and Iron Company, Limited, are again opening their spelter furnaces, which have been shut down since the old Lehigh Zinc Company ceased to operate. The new spiegeleisen furnace recently erect-

Ten stove molders who have been employed at the works of Shantz & Keeley, Spring City, desire to form an association and go into the stove business for themselves. Their

time built over one hundred more at their own shops, the company are badly pressed at present for locomotive service. The Baldwin Works can furnish none until September next, being pressed with previous contracts, and the first cost and added duties make it too costly to import them. Proposals for the construction of fifty new argines have been resent for locomotive service. The Baldwin Works can furnish none until September next, being pressed with previous contracts, and the first cost and added duties make it too costly to import them. Proposals for the construction of fifty new engines have been invited recently, and will be acted upon in a few days. Meanwhile the shops at Altoona few days. Meanwhile the shops at Altoona are being rushed with work, and their facil-

are being rushed with work, and their facilities are being enlarged, and the P. & E. shops at Renovo are also being brought into requisition, to relieve the very healthy demand that is pressing the company.

A new company has recently been organized in Reading, Pa., to be called the Pennsylvania Bolt and Nut Company. The capital is to be \$100,000, with the following officers: H. S. Eckhert, president; James Lord, secretary and treasurer; Thomas Darlington, general superintendent. Mr. Lord was ten years and Mr. Darlington fifteen years in the employ of Mr. J. H. Sternbergh, of Reading. The company are building their own machinery, and expect to be in full working order some time within six or seven months. They expect to have the latest im-provements for carrying on business successfully, and the new company will doubtless be a valuable acquisition to the many impor-tant industries of Reading.

PITTSBURGH AND VICENITY.

The Pittsburgh Locomotive Works are about to erect a shop connecting with their works 125x75 feet in extent and two stories high. They also propose to build a fine three-story brick office, 50 feet square, on Beaver

avenue, Allegheny.

The McKeesport Tube Works have been lighted by Edison's incandescent light, the first of the kind in Western Pennsylvanis.

The establishment lately owned by Nellis, Shriver & Co., in Allegheny City, has been sold to D. R. McIntire, who will continue the business under the firm name of Nellis,

McIntire & Co.

The firm of Rosenzi, Maloney & Co. has been dissolved by the withdrawal of Mr. Enrico Rosenzi, and the business of manufacturing glass pots will be carried on by the Messrs. Maloney, under the name of T. & T. J. Maloney.

WEST VIRGINIA.

The hob nail feeders are at work again at the Top Mill, Wheeling.

OHIO

The Lane & Bodley Co., Cincinnati, builders of stationary and portable steam engines, elevators and ore-crushing machinery, find it necessary to extend their present estab-lishment in order to be prepared to meet the increasing demand for their products. Ar-rangements have accordingly been made for the erection of a four-story building adjoin-

Brown, Bonnell & Co. have ordered what is known as the McDonald shield, to be placed upon the puddling and heating furnaces in all their mills. Already two carloads have all their mills. Already two carloads have been received, and the work of placing them in position will be commenced at once and pushed forward until all are furnished. By this invention the employees can work with some degree of comfort, and the liberality of the company in supplying this worthy invention is appreciated by the workmen.—Commercial Gazette.

The Mount Vernon Furnace, after being thoroughly repaired, has blown in again and will run on warm blast. They have plenty of orders.

East Liverpool citizens have contributed money to buy three acres of ground for ex-tensive glass works to be erected by H. C. Fry, manager of the Rochester Tumbler

The Enterprise Machine Company, Geneva have started their foundry furnaces. When the full force is at work it will number 250 men. The company have over \$40,000 worth of orders for casting on their books. -- Cleve-

land Herald. The Center Furnace is adding a Player hot blast, and will probably reline. They will run this year on warm-blast metal, and ex-pect to be ready to blow in as soon as stock

omes in. Youngstown is negotiating for the estab-lishment of mammoth locomotive works at

Parties from Bellaire have examined the old Marietta rail mill with a view to purchas-

ing.
The Columbus Rolling Mill will turn out its first steel rails in March next. The Grace Furnace, owned by the Brier Hill Iron and Coal Company, now holds the

Hill fron and Coal Company, now holds the belt for the largest daily production of pigiron from a blast furnase in the Mahoning Valley. Last Thursday the product was 142½ tons of No. 1 iron, and the average daily production for the past week has been 125 tons a day.

The Cowing Steel Castings Co. have been organized at Cleveland, with a capital of \$500,000. The incorporators are: Stevenson Burke, George Cowing, Willis B. Hale, E. H. Cowles, Theodore Simmons and W. B. Sands. The principal office will be in the city of Cleveland, and the corporation was formed "for the purpose of manufacturing east steel in all its forms, and for the purpose of purchasing, owning and controlling and selling and leasing to others sundry patents for silica, steel molds, and other patents in the contraction of the contrac ed will soon be in operation by the new zinc company. The manufacture of oxide of zinc is extensively carried on, and ere long the zinc works will again be more prosperous manufacture of east steel, and for transacting than they have been for ten or fifteen years.

with the principal business for which said company is organized."

The Rad Jacket Pump Works, at Cineinnati, are being run to their utmost capacity. The "Rad Jacket" received the premium at the Atlanta Exposition as the best pump exhibited. into the stove business for themselves. Their capital, the savings of their industry, is sufficient to run the works according to their plans, but not to buy the ground and erect the necessary building. They hope to find some capitalist willing to build and least them a suitable structure in Norristown. No definite arrangement has yet been reached. Notwithstanding the Pennsylvania Railroad Company, in their last annual statement, reported their ownership of about one thousand locomotives, and have since that time built over one hundred more at their own shops, the company are badly pressed at

are unusually busy for this season, being no less than 250 governors behind orders, which accumulate rapidly. Among them is one 12-inch for a Pittsburgh rolling mill; two 10inch for a Pittsburgh rolling mill; two foinch, a g-inch, with angle valve, for the St.
Croix (Minn.) Lumber Company, and another
of the same size, with the same style valve,
for the Quincy Lumber Company, besides a
number of orders for 6, 7 and 3-inch machines. These large sizes are very unusual,
and require great skill to insure successful
operation.—Industrial World.

The McCormick Harvesting Machine
Works, of Chicago, are running day and

The McCormick Harvesting Machine Works, of Chicago, are running day and night. They employ 1300 men.

Charles F. Elmes, of Chicago, is building a very large ice machine on a new system, which employs air instead of chemicals to reduce temperature. The machine is intended for the Fairbank Burnham Machine Company.

WISCONSIN.

A fire at Bay View, near Millwaukee, on the morning of the 12th, damaged the puddling department of the North Chicago Rolling Mill to the extent of \$5000, and the machinery to the extent of \$2000. This, however, we presume will not interfere with the filling of the mill's orders.

#### MISSOTTRY.

William J. Park, John Kimpel and C. E. M. Champ are the incorporators of the St. Louis Spring Company, recently organized with \$20,000 capital, for the manufacture of steel springs.

#### ALABAMA.

We are reliably informed that the rumored

## The Iron Age

#### Metallurgical Review.

New York, Thursday, February 16, 1882.

DAVID WILLIAMS . . Publisher and Proprieto JAMES C. BAYLES - - - Editor. JOHN S. KING . . . . Business Manager

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On another page we print a second letter on the subject of the duty on iron ore. A controversial communication disputing statements contained in an article not published in our columns, has less interest than would attach to a presentation of the facts on their merits. We are very willing that iron mine owners should present in our columns the reasons for their demand for a higher of Colorado, are opposed to it. It is evident rate of duty, but as Mr. Hewitt and Dr. Raymond have not favored The Iron Age with letters on this subject, we naturally feel very little interest in a controversy to which favorable to the commission heretofore. It their views, elsewhere published, may have is believed that the present Congress should given rise.

### Present Time?

In a remarkable letter to the Secretary of the Treasury, which has just been given to the public, and which we shall treat of more resented as likely to be quite extensive. The manufactured out of them (for nearly all the ing the next few days will decide its fate. blooms that have been imported are for rails), and on the price at which these blooms and rails can be furnished by our mills, compared with the prices at which rails made from imported blooms can be sold.

As to the first point, can our mills supply the demand for blooms and rails ? speaking only of Bessemer, a sufficient answer to this question will be found in the statistics of "Bessemer Steel Production," on page 19 of our issue of last week. Already the improvements that have been completed at our sasemer works will give a production above the production of 1881 of very many thousands of tons in excess of the number of tons of blooms imported. In other words, our mills can supply as many rails as they did in 1881, as many blooms as were imported for manufacture into rails in 1881, and have a large surplus over. This only refers to improvements already completed. When the six converters that are building are finished this will be largely increased. The product of 1883, if not of the last six months of 1882, will be at the rate of 2,000,-000 tons of ingots a year.

Now, what effect will this have on prices ? blooms can only be imported and rolled into rails at a profit in exceptional cases. Our last cable dispatch quoted blooms at 112/6, or £5. 12/6. Freights, Liverpool to New York, 17/6. This would make the cost of steel rails as follows :

Cost of blooms in England.
Duty at 45 %.
Fraight to New York
Commission, brokerage, credit, &c.
Freight to Mill
Cost so roll into rails.

Total.... \$54.79 And this without including anything for freight from English mill to seaboard, or any allowance for waste, crop ends, &c., and putting many of the items below what they really are. Our Philadelphia correspondent moted blooms at \$46 duty paid, or £6. 12/6 . i. f. Philadelphia. Add the two last items above to this, and the rail would cost \$56. without any allowance for crops. Rails can be bought for this price, or less, and the fact that sales of blooms have been made from second hands at lower prices than those moted, shows that holders believe that now is a good time to unload. Blooms cannot be imported to-day and rolled into rails at a profit. How much lower blooms can be sold on the other side is a question we are not prepared to answer, but the outlook is that the \$3,000,-000 duty which the writer of the letter to Secretary Folger indicates will be derived this year from "steel blooms," &c., will not be

#### The Tariff Commission Bill.

The Tariff Commission Bill is now fairly nunched in both houses of Congress. The ome time, and several speeches have been Funding Bill, which is now out of the way, and by the Arrears of Pensions Bill, which one, but it can scarcely be remedied by will soon be disposed of. Mr. Morrill has resolutions or circulars. The committee also will insist upon some disposition being made of this bill-after debate, of course. In the House, the Ways and Means Com-

mittee have introduced Mr. Kasson's bill. amended so as to confine the action of the commission to tariff subjects alone, the provision authorizing them to investigate the internal revenue question being stricken out. This provision was stricken out in concession to a feeling that exists favorable to the immediate reduction and gradual extinction" of the revenue on spirits, tobacco, &c. This bill, as reported in our Washington letter last week, provides for a commission to be called the Tariff Commission, to consist of nine members from civil life, to be appointed by the President, by and with the advice and consent of the Senate. But Mr. Randall has given notice that he will composed of two Senators, three members of what will be the fate of the Commission bill. Old members of both houses, who remember the results of the labors of previous commissions, de not take kindly to the idea of a commission, and it is reported that several Senators, among them Sherman, Plumb and Jones that the vote will cross party lines. There has also been a decided change of opinion among members of the House who have been take some definite and final action on tariff

fully at another time, the prospective importation of "steel blooms" in 1882 is repeated. These members believe that the present Congress was elected to act finally on the writer of the letter referred to estimates the tariff and that it should so act. The conduties that will be collected from "steel dition of affairs also leads some of the wire rods" and "steel blooms" in 1882 at shrewdest to believe that Congress had betabout \$3,500,000. Let us see if this is probable. The importation of steel blooms in tions, so that they may be prepared at any 1882 will turn on two points, or rather on time to take any action needed. On the one proposition and a corollary-that is, on whole, the situation is "mixed," and it is the ability of the mills of this country to impossible to tall the outcome. The course supply the demand for blooms and the rails of the debate in the Senate over the bill dur-

THE IRON AGE.

#### The National Association of Stove Manufacturers.

The meeting of the stove manufacturers, held last week in Cincinnati, was perhaps less fruitful of practical results than any previous meeting. The social features were delightful. Members attending from other States greatly enjoyed their visit; but from lack of any previous preparation of an order when discussion of the questions of trade interest fairly began there was apparently no unanimity of sentiment, and no opportunity to reach a conclusion on any of the many subjects demanding the attention of

such a body. After electing its officers for the ensuing year, the Association directed the appointment of a committee to prepare business for the meeting and then adjourned. This committee was not able to report until the following day, so beyond electing its officers and some new members, nothing whatever was done on the first day of the session. When the committee's report was received, It goes without saying that it will tend to it was found to be in some respects so radical reduce prices both for rails and ingots. It in its recommendations that it could only be has already had this effect, and to-day steel adopted in part, and many subjects of great importance which might have been included in it seem to have been forgotten by the committee during the four or five hours of its deliberation.

The first and most important of the committee's recommendations related to prices. On this subject the report recommended stoves, and an increase of fully 10 per cent. in the average cost of labor, the selling price of stoves be advanced to per cent. over the basis adopted at the June meeting last year. This recommendation met with sharp eppo-sition. It was finally rejected by a heavy vote, and a substitute adopted, declaring 'That it is the opinion of this body that the 'advance in raw material and labor warrants and suggests a general advance of prices." The reason for this non-commital action is probably found in the unset tled condition of the labor market, which, though a matter of the greatest practical importance, the association did not deem it expedient to discuss. For repairs and odd mittee that steel plates for boilers (and the plates, the rate approved by the society is 8 cents per pound, and the discount agreed to on hollow-ware is 50 per cent. off the established list. The committee recommended that the credits in the stove trade be shortened, and the usual term of four months be reduced to thirty or sixty days. This was debated somewhat vigorously, and a good deal was said in favor of a shortening of credits, but the trade was obviously unprepared for such a change, and the recommendation was rejected. A resolution, directing the secretary to issue a circular request-Morrill bill has been before the Senate for ing the railroad companies to give better and safer transportation for stoves, and so remade with it for a text, but consideration duce the cost of repairs for new goods, was has been postponed by the debate on the adopted without discussion. There is no question that the evil complained of is a serious given notice that he will antagonize all bills made an unwise recommendation, that the with the Commission bill, which means that offices or secretary and treasurer be combined strength, carbon below 2-10 of 1 per cent., blast-furnace practice, considering the latter he, as Chairman of the Finance Committee, in one, as the society needs more than anything else a permanent paid secretary, who will give his attention to working up statistics of the trade, and to the elaboration and editing of its publications. The movement suggested by the committee is entirely in the

vrong direction. The foregoing represents about all the action of the association relating to business. We do not wonder that many of the members, especially new members in attendance for the first time, were disappointed at the discussion and dissatisfied with the action which followed. As one of the members forcibly remarked, the meeting was very pleasant and the social features were all that could be desired, but the session lacked the true ring of business. His suggestion that the committee appointed to prepare a list of topics for discussion should have at least six move to amend by having the commission months for deliberation, was a good one. It was, as many manufacturers well remember, the House and four civilians. It is uncertain made a duty of the Executive Committee to prepare such an order of business in advance of each meeting, but we believe that they have thus far neglected this duty. It is to he hoped the special committee appointed will give it the attention it merits.

There seems to be a growing conviction among manufacturers represented in this association that, to ignore the labor question entirely and exclude discussion relating to it from the meetings, is a mistake. We think so, too. While it is possible that the molders would make such use as they could of what

Its action may or may not be acceptable. the manufacturers when they come together When it reports, this Congress will have but gives the molders vastly more encouragecorrectly examine and discuss the report, es- that might be said. There is really no reapecially in view of the attacks that will be son why the molders should be regarded with such tender consideration as has hitherto been shown for their feelings. They have been accorded an exaggerated imporand their present attitude is one of organized hostility to the interests of manufacturers. If the latter imagine that by ignoring the the impression that they intend to charge no haustively, and no reason why it should be disaster, the country at large will exult molders for increased wages should be silenced as if it was a treasonable utterance.

It is not necessary, perhaps, that the Nathe subjects of labor and wages, but it would their own petard. Their fate would be like when discussion of the questions of trade matters, and without such discussion any action it may take with regard to prices fails to impress the trade as taken in good faith and with a purpose to conform to it in disposing of their products. Of course, an esociation so constituted cannot fix prices. It has no means of enforcing its decisions, and were it to attempt this, it would fall to pieces like a house of cards. For the same eason it cannot fix wages, but until manufacturers can muster up courage and look the Molders' Union squarely in the face, and tell each other the plain truth about its demands and how they are to be met, the Association's usefulness will be restricted within very narrow limits.

#### Steel Ships for the Navy.

The testimony given before the Committee on Naval Affairs of the House of Representatives as to American steel for shipbuilding, fully justifies the editorial in our issue of January 5 on the relative quality of English and American steel. It will be remembered that, in view of the increase of from 15 to 20 that the editorial in question was called out per cent. in the cost of materials entering into by a remark in the New York Times, which ems to omit no occasion, good or bad, to decry American products and American ideas. The Times said: "It would be particularly unwise to build American men-of-war of American steel, for, however good our iron may be, we have not yet been able to pro duce steel that is at all equal to English steel and Mr. Vanderbilt prefers to import steel rails for his road at a very much higher price than he would have to pay for home-made protected steel."

The testimony before the Naval Committee to the effect that it would be particularly wise to build American men-of-war of American steel. It was shown to the comconditions of plates for boilers and ships are the same) were first successfully made by Hussey, Wells & Co., of Pittsburgh. It was shown that for years the attempts of the English to make these plates were absolute failures, and that the years of discredit that injured the reputation and delayed the introduction of steel plates for shipbuilding were due to the extremely poor character of English steel plates, and that their reputation was established and maintained by Pittsburgh steel manufacturers. The difficulty with English plates was their high carbon and great tensile strength, which were hostile to ture of boilers made out of English steel at weight. The American practice, on the other a successful steel plate. The experience of the Pennsylvania Railroad with steel plates of English make was a bitter one, and it was success for years. Latterly, however, the English have begun to learn from us the ecret of making steel plates for boilers and ships, but American steel plates for these uses are better to-day than English and always have been better. The Livadia's experience would not have occurred had the plates been American, for we have had a longer and more successful experience in manufacturing them than the English.

It seems quite well settled that the Committee on Naval Affairs will recommend the use of steel in the hulls of vessels to be constructed for the navy. Mr. Roach recommended steel, although his interest would have led him to recommend iron. Mr. Gibbons, President of the Pusey & Jones Ship Mr. Richards's remarks will be amply repaid Building Co., Wilmington, Del., also advised the use of steel in preference to iron. The only fear has been that in case steel was adopted it would not be possible to get American steel, but this fear is groundless. making the plates, and a number of iron mills have plate mills that have been built with a view to rolling steel some time, so that this fear may be dismissed.

The meager attendance at the so-called was said on this subject at the meetings, the anti-tariff caucus of the House of Represen- "to pay. All that the association has now

Can Steel Blooms be Imported at the matters. The commission is only tentative. obvious fear of the Molders' Union shown by tatives, less than forty members being present, shows that the free traders still remem-ber their defeat in a previous caucus when three months of life, a time inadequate to ment than they would derive from anything they attempted to force thair party into the attitude of opposition to protection.

#### The Collapse of Speculation.

Indications are multiplying that the gigantance in the trade. They are paid out of all tic speculations in some of the leading staples, proportion to other labor requiring equal skill, maintained for six months past at a fearful cost to the general interests of the country, are approaching a collapse. Some of the principal actors have already succumbed unlabor question in their meetings they deceive der the load imposed by declining prices, and the molders, they are mistaken. If they imagine that by refusing to agree to an advance in prices they convey to the molders prices, however, is met by corresponding weakness in the foreign market, so that the more for their stoves this year than they did much-desired export basis recedes, as a last, they are mistaken again. In fact, there natural consequence of the pressure to unis every reason why this great question load. But the end cannot be far away, and should be discussed fully, fairly and ex- if individual fortunes vanish in a sweeping shirked, or why reference to the demand of rather than repine. The public verdict will be, that those who conspire to maintain exorbitant prices, to the detriment of all legitimate business interests, experience no more tional Association should take any action on than a just retribution if they are hoist by that of the man in the fable who, hoping to grain only to find a heap of putrefaction when the doors were opened.

The gradual shrinkage of values which is beginning to attract attention in business circles, is thus noticed by a writer who freuents the Produce Exchange : "In Chicago, March wheat sold a week ago at \$1.313%, and May corn (the favorite option) at 66 1/8 cents. Since then the former has touched \$1.25%, and the latter 61% cents. March pork declined recently from \$18.50 to about \$18, and March lard from \$11.40 to about \$11." In a speculative business, where fortunes are gained or lost on changes amounting to a fraction of a cent, the significance of figures like these can be easily understood. Already there are intelligent observers who anticipate a speedy renewal of shipments by sea and by rail, starting anow the wheels of commerce, checking the export of gold, and returning to channels of legitimate pursuits enormous amounts of capital now otherwise employed. Taking lessons from the past, however, it is safe to assume that foreign buyers will not take hold greedily on the first symptom of decline. The losses sustained in a protracted derangement of the American export trade are too heavy to be reimbursed very soon on a small margin of profit. But when the obstruction is once fairly removed, and grain and cotton go out in conformity to the laws of supply and demand, we shall have no lack of commercial bills in regulating foreign exchange. The end wished for is hastened by the remarkbly mild winter in the Northwest, giving promise of early and abundant crops.

We publish elsewhere the remarks of Mr. E. Windsor Richards on the English and American steel trades, made at the recent annual dinner of the Cleveland Institution of Engineers. Mr. Richards justly appreciates the good work done by several of our large establishments, such as the Edgar Thomson Steel Works and the Bethlehem Works, and states that, since the output of the former establishment for some time past was probably the largest quantity obtained from an American plant of two eight-ton converters, and as this year the three ten-ton converters will be in full operation, it will be interesting to note this output for future comparison. Mr. Richards attributes the larger output of American as compared with English works, to the fact that with ductility. Examples were given of the rup- hurried work English producers could not fulfill the conditions of the exacting forty pounds steam pressure, and of these specifications of English and Continental enboilers with plates of high tensile strength gineers. After briefly reviewing the imand low ductility breaking of their own provements and extensions contemplated in hand, sought a comparatively low tensile a short account of American rail rolling and and an increased ductility, and the result was inferior to that of the Cleveland district. Concerning engineering matters connected with iron manufacture, a novel plan of erecting the casings of fire-brick and only with American plates that they had any wrought-iron chimneys is described, this method being adopted by the Pennsylvania Steel Works, Harrisburgh. Mr. Richards also gives some account of the general prosperity of our country, which he attributes to the influence of protection, and in concluding states that though English ironmasters are all sound free traders, there is probably not one who would not instantly become stanch protectionists if his works could be transplanted to American soil. From all that Mr. Richards has been able to gather during his American visit, he predicts a good year's trade for us, and thinks that notwithstanding our great efforts to supply our own wants. we must have Cleveland pig iron and hematite Bessemer iron. A careful perusal of by the large amount of interesting information contained therein

Over the signature of "Steel Rail Manufacturer," which will scarcely serve to cover A dozen works that could be named have all the writer's identity, the absurd statement the facilities for turning out the steel and of the Times that the Bessemer interest of this country is a monopoly, is effectually and neatly disposed of. writes: "Your Philadelphia correspondent misleads you. The Bessemer patents have expired : the field is clear to all : the three new works now building have no royalty

" are some mechanical devices, the use of "which is offered to any one for fifty cents " per ton. The new works prefer not to use them. We shall not attempt to discuss the " surely we shall be found hereafter agreeing "upon one point, viz: To charge that the "manufacture of Bessemer steel in this " country is a monopoly protected by patents "would be such a mistake as the Times "would not like to make again in its edi-"torial columns." Of the truth of every word of this there is not the least doubt, and yet we presume the old falsehood will continue on its travels, and that many a rhetorical free trader, both in Congress and out, will use it to point a moral for years to poor man's shirt, which Henry Clay showed the absurdity of years ago, and which every one supposed dead and buried and turned to bobbed up serenely" before the Ways and Means Committee last week, in the mouth of a manufacturer of barbed wire. Such an argument from such a source is indeed a surprise. We should as soon have expected to hear an argument of the drivenwell people against the liberality of our pres-

Hon. Thomas M. Bayne, of Allegheny, introduced into the House of Representatives last week a resolution calling for informa-tion regarding the arrest in Mexico of some glass blowers, who went from Pittsburgh to operate a glass factory near the City of Mexico. It seems that these men were induced to go to Mexico on a promise of \$130 a month when the furnace was in operation, and \$1.00 a day when idle. The men write from Apam Jail, Mexico, as follows:

DEAR SIR .-- We are three American citizens hired DEAR SIR.—we are three American citizens nired ast July in Pittsburgh to come to Moxico to a place called Appapewasco for \$130 per month in American coin and our passage and expenses paid and one dollar per day when not in blast. N. B. the words "not in blast" mean if they want us to stay the next fire they pay the blowers the dollar to stay while the fire is out. Instead of taking us to the above place they brought us to Anam, anether place entirely. There was no furnace, no pots, nor hardly anything on the premises. And for five months we did not blow. No fault of ours. We saked for a settlement, and they refused us one. We told them we would not work. We left and went to Vera Cruz, intending to go home. They sent a telegram and had us arrested and put in jali; they kidnapped us up here under false pretense; they have trumped up a charge against as for violation of contract when they broke the contract first; they have charged us with our pas-sage and expenses here, and only want to allow us one dollar per day from the x4th of July until the 6th of December, the day we common biow. We have no money and cannot speak the language, consequently have no counsel.

There seems to have been at least a misunderstanding, and we call attention to the too great eagerness of workmen to go to a great distance without carefully understanding the terms. They get an idea of what the terms are, oftentimes an erroneous one, or it may be that, as seems the fact in this case, they get the right idea of the terms, but they turn out to be different from what they supposed, and trouble results. These large offers from other countries are too often false lights. In most cases it is best for the workmen in this country to stay at home.

The foreign commerce of New York for January shows an extraordinary aggregate, the imports reaching a value equal to \$40,-135,673, which amount has never been surpassed in any corresponding month, except in January, 1880. While the imports increased \$8,399,157 above the January imports last year, the exports of merchandise and produce decreased \$2,416,185 for the same time; but taking the trade of all the ports together for the last seven months, there is still a balance in our favor. The cash duties collected in the six months ending December 31, amounted to \$88,470,994, which is much larger than for any previous six months in

The Assay Commission appointed to count, States Mint during the year 1881, have completed their work, and are said to be particularly gratified with the results. count verified the respective amounts exhib ited by the official books, the total exceeding \$100,000,000 in gold and silver, and it appeared that the greatest deviation in fineness from the standard in the coinage under examination was far within the limits allowed by law. Such facts are creditable to the Government and to the fidelity of those chosen to responsible trusts.

Mr. W. H. Melhuish, of Williamsport, Pa., some time ago invented a breech-leading cannon, which, we are informed, is an excannon, which, we are informed, is an extremely effective weapon. A gun constructed according to his views, 3½ feet long with 1½-inch bore, weighing 160 pounds, was recently tested with entirely satisfactory results. As soon as the gun is discharged the breach is they were open, electing the shell the breech is thrown open, ejecting the shell of the cartridge by means of a spring, and allowing a current of fresh air to rush through and cool it off. The unlocking of the gun and the throwing open of the top of the breech require scarcely a sec ond of time, and in another second the gun can be charged, the breech relocked and the It requires neither rammer nor swabber, and in case it should have to be nor swabber, and in case it should have to be abandoned on the field of battle the withdrawing of a pin through the hinges of the breech door will render it impossible for the enemy to turn it on the retreating forces. It is said that the force of the weapon can be made equal to that of any long-distance gun had been to the needs of the service, either for use in fortifications, on war vessels or in the field. The gun is manufactured at the Valley Ison Works, Williamsport, Pa., and its capacity is thirty shots per minute.

United States on account of the patent fund on January 1, 1832, amounted to \$1,830,-110,32. Acting Commissioner Stockbridge in his report says: "The receipts of the effice during the past year exceed those of any previous year by nearly \$100,000, and the excess of receipts over expenditures, \$2.85,-100, and \$1.50 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; marble, \$5 to \$100 per ton; finished, \$2 per ton; narble, \$5 to \$100 per ton; finished, \$2 per ton; narble, \$5 to \$100 per ton; finished, \$2 per ton; narble, \$5 to \$100 per ton; finished, \$2 per ton; narble, \$5 to \$100 per ton; nar

The Duty on Iron Ore.

To the Editor of The Iron Age: The attempt "these. We shall not attempt to discuss the of the ore miners of Morris County to protection of protection with the Times, but tion of foreign iron ores seems to excite a great deal of indignation on the part of the conductors of the Engineering and Mining Journal, who probably think that common people have no right to opinions. They claim that the memorial offered to Congress is reckless in its statements. The quantity named, 724,210 tons, is probably correct, as the Treasury reports show the import from June 30, 1881, to October 31, 1881, to be 351,704 tons for a space of four months. The valuation of \$2.84, which is undoubtedly the invoice value, is only represented as laid down on our docks when brought as ballast, come. The old argument about taxing the paying no freight and exclusive of the duty paying no freight and exclusive of the duty is that amount in round cents that would be levied upon an invoice at that price, the precise amount being 56.8 cents; this duty, of course, is to be added to the invoice in making up the cost to the consumer. Admitting the claim that wages average bemitting the claim that wages average between thirty-five and fifty cents per day, What kind of pay is that for a laboring man to support a family on? "Put yourself in his place." Imagine the editor of the Engineering and Mining Journal working for thirty-five cents per day; it wouldn't pay for his breakfast. It is further stated that "Jersey Ore's" statement that the Bilbao ores have been laid down at less than \$2 per ton on board ship during the past year. \$2 per ton on board ship during the past year, is misleading. The price of ore, as stated, is not disputed, and so far from being misleading the statement leads directly to the point on which all native ore men should keep their eyes fixed, for if it were not for the develop-ment of the Bilbao mines there would be scarcely any cause of alarm among our ore producers about foreign ores. The quantity producers about foreign ores. The quantity of ore at Bilbao is enormous, the Somorrostro mines being estimated in 1879, by competent engineers, to contain 60,000,000 tons of ore, this being only one of numerous other mines; the estimated cost of excavation was less than twenty cents per ton, and, the mines lying near the seaboard, the ore could be delivered on board ship for about could be delivered on board ship for about seventy-five cents per ton, including royalty. There is nothing in the world equal to these mines in quantity of ore and cheapness of production

Mr. Hewitt's letter was a bold attempt to hoodwink the Morris County miners. There are but few of the ores of Morris County that can be mixed with foreign ores, four-fifths of them being too high in phospherus to ever be used in making Bessemer steel by the direct process. The statement "that every ton of foreign ore that is brought enables a ton of our ore to be used which would otherwise find no market," is controverted by the statement in editorial of 28th inst., that Mr. Hewitt's firm "manufactures no Bessemer iron, has never extensively imported foreign ores, is now using exclusively native ores, is mining now more than their own large consumption and selling the sur-plus." His statement that his firm is the largest miner refers strictly to the present, being made particularly for the purpose of giving weight to his previous statements, though the fact remains that neither in the ag-gregate nor at the present is his firm the largregate nor at the present is his firm the largest miner. His movements are controlled strictly by his disposition as a manufacturer to keep down the price of labor to the lowest possible point; his letter is what is generally known as a piece of "taffy," and Morris County wants no more of it. For the information of the public it is well to state how Mr. Hewitt is protected as a manufacturer. The duty on some of his products at Trenton are as follows: Bar iron, \$33.60 per ton; iron wire, \$50 to \$100 per ton, according to size; beams and channels, \$28 per ton; chains and cables, \$56 per ton. As by the census reports of 1880 it requires 2½ tons of iron ore to make I ton of iron, it would seem that it would take more than \$3.50 worth of ore to make a ton of iron. Chester ores are the lowest priced in Morris County, the best ores selling as high as \$5.50 per ton. The estimate that two-fifths of the cost of the iron is in labor in ore was based upon an average price of \$4.50 per ton at Port Oram for a 50 per cent. iron, making \$9 for enough ore to make a allowing 50 cents per ton of ore royalty and 40 cents per ton for mine profit iron or steel, and on all manufactures, wares, and charges other than labor, brings the cost vessels and articles of iron or steel, or of of the labor in the ore required to make a ton which such metals or either of them shall be of iron to just the price named—\$7.20—as being two-fifths of the total cost of the iron. As the Engineering and Mining Journal seems to be sadly rusty on Morris County ore matters, they had better send up an expert to report. "Foreign Ore," in a letter to the Engineering and Mining Journal of February thinks that the duty on iron ore would njure the pig iron men. If that is the case He seems to be a little off in his geography, evidently supposing Cleveland to be a seaport on Lake Champlain. As figures never lie, it is well to compare the protection to labor afforded by the duties on steel rails, pig iron and iron ore. The probable cost of labor in converting a ton of pig into steel rails is about \$7, which, with the duty of \$28 per cost of the labor in reducing ore to pig iron is \$2.50 per ton; the duty is \$7, or 280 per cent. The cost of the labor to produce sufficient ore to make a ton of iron is \$3.20; the duty is \$1.14, about 16 per cent. The duty on iron ore, in order to afford the same protection to labor as that on steel rails, ought to be about \$14 per ton. Iron ore is inadequately protected as compared with other products of the earth obtained by digging, quarrying, excavating or mining, such as unwrought clay, pipe-clay, fire-clay—duty, \$5 per ton; bituminous coal, 75 cents per ton; grindstones, rough or unfinished, \$1.50 per ton; finished, \$2 per ton; marble, \$5 to

give the miner of New Jersey \$1.50 per day, as against 35 to 50 cents per day paid in Spain. All duties, to be effective, should be specific, whether levied for revenue or pro-JERSEY ORE

#### The Basic Process.

The following letter, just received from Mr. Sidney Gilchrist Thomas, will be read with interest :

27 TEDWORTH SQUARE, CHELSEA, LONDON, S. W., January 24, 1882. }
To the Editor of The Iron Age.—Sir: I ob serve in the issue of December 29 of your usually peculiarly well-informed paper, an article on Mr. Reese and the basic process, which is evidently founded on erroneous information, and is, I venture to think, calculated to considerably mislead your readers.

A preliminary decision has indeed been given in two cases in which Mr. Reese and myself are concerned, which relate to a proposed modification of the basic process. The decision has been appealed, and the question is therefore still sub judice, and any comment on the matter on my part would, in consequence, be disrespectful to the court. When a final decision has been arrived at, I hope to ask the hospitality of your columns for a statement of the true position of the case, which, I venture to believe, will give it a very different complayion. Any one who a very different complexion. Any one who will take the trouble to read the various patents issued to Mr. Reese between 1865 and 1877, can readily form his own estimate of the merits of Mr. Reese's recent claims. In the meantime, I may state that no one of the series of patents which cover the actual basic process, as now regularly used under my license in England, France, Germany, Austria, Belgium and Russia, in the production of over 30,000 tons of steel monthly, is even in interference, all having been granted by the United States Patent Office, and remaining, so far as I am aware, uncontested. Yours truly, Sid. G. Thomas.

#### The McKinley Bill.

The Western Iron Association at its recent meeting, adopted the following memorial to

To the Senate and House of Representatives in Congress assembled: This memorial of the Western Iron Association respectfully showeth:

That the Western Iron Association is an organization composed of the manufacturers of merchant iron west of the Allegheny mountains, including upward of seventy rolling mills, located in the States of Pennsylvania, West Virginia, Ohio, Indiana, Illinois, Michigan, Wisconsin, Kentucky, Tennessee and Missouri.

These mills represent many millions of capital invested and employed. They give employment directly to over 100,000 workingmen, and indirectly by reason of their great consumption of ore, coal, limestone and pig iron, and of agricultural products by those employed, to many thousands more. For the protection of this labor and this capital, in connection with that employed in other in connection with that employed in other industries, the tariff laws now on our statute books have been enacted. Through a failure in the wording of these laws to clearly define their true intent and meaning there has grown up under the action of the so-called "omnibus" clause a body of decisions that are hostile to the spirit of these acts, and have reduced the duties to be levied on certain articles very much below what Congress, in these acts, evidently intended they should be. These decisions have substituted ad valorem rates for specific rates, contrary to the spirit of these acts, thereby inviting undervaluations and frauds on the revenue. They have also resulted in many cases in reducing the duties on articles very much below the duties on the articles from which they are made, a clear violation of the which they are made, a clear violation of the spirit of the tariff acts. To correct these decisions and provide for the enforcement of these acts in their true spirit and intent we respectfully urge the immediate consideration and prompt passage of the following act, which has been reported favorably to the House of Representatives by the Committee House of Representatives by the Committee

of Ways and Means .
"Be it enacted, that title 33 Revised Statutes be amended by adding to schedule E of said title the following: 'Provided, that on all which such metals or either of them shall be the component part or material of chief value, whether wholly or partially manufac-tured, there shall be levied, collected and paid no less rate of duty than the duty or paid no less rate or duty than the duty or rate of duty imposed upon said goods, or upon any part or material of said goods in any of the forms in which it or they last ex-isted prior to their passing into the form or article upon which duty is to be levied. This act shall not apply to nor in any manner affect articles specifically enumerated in this title by their commercial designation, but shall only apply to articles designated in this title as manufactures of steel, or of which steel shall be the component part, not otherwise provided for; steel in any form not otherwise provided for; manufactures, articles, vessels and wares not otherwise vided for, of iron, or of which iron shall be the component material of chief value metals unmanufactured not otherwise pro-vided for and castings of iron not otherwise

Annual Patent Office Report.-The nnual report of the Commissioners of Patents annual report of the Commissioners of Patents for the year ended December 31, 1881, has been presented to Congress. The report shows that the total receipts of the office during the year from all sources were \$853,-665.89, and the expenditures \$605,173.28. The total balance in the Treasury of the United States on account of the patent fund

mony in cases where the question of public use is raised, similar to that already existing, use is raised, similar to that already existing, for taking testimony in interference cases. The Commissioner urges upon Congress the pressing necessity of increasing the examining force of the office, and providing more room for the use of the office. The following is a summary of the business of the office during the part warr. Number of application for is a summary of the business of the onice during the past year: Number of applications for patents for inventions, designs and reissues, 26,059; number of caveats filed, applications for registration of trade-marks, labels, &c., 4,183; total number of applications requiring investigation and action, 30,242. During the year there were issued 17,520 patents and designs, as against 16,584 for the year ending December 31, 1880.

#### American Institute of Mining Engineers.

The annual meeting of the American Institute of Mining Engineers, to be held at Washington, will open on Tuesday, the 21st, with addresses by the Hon. N. P. Hill, on with addresses by the Hon. N. F. Hill, on behalf of the Regents of the Smithsonian In-stitution, and by Major J. W. Powell, Di-rector of the United States Geological Sur-vey, and Chairman of the Local Committee of Arrangements. At the conclusion of this session Major and Mrs. Powell will hold a reception for the members of the institute reception for the members of the institute and the ladies accompanying them. The morning session on Wednesday, February 22, will be devoted to the reading and dis-cussion of papers, and at a special session to be held in the efternoon in memory of the late Alexander Lyman Holley, it is expected that a number of those members who personally knew Mr. Holley will speak, each contrib uting briefly from his own experience. Such as cannot be present are invited to send letters to the secretary before the meeting, and it is believed that a general response to this invitation will yield a more appropriate tribute to the many virtues and varied accomplishments of the deceased than any single and elaborate eulogy. The evening session, at 7:30, will be devoted to papers and discussions on iron and steel as structural materials. Papers will also be read and discussed at 10 a. m., February 23, and in the afternoon an opportunity will be afforded to visit the White House and the Treasury building. There will be a subscription dinner in the evening, and we can but express the hope uting briefly from his own experience. evening, and we can but express the hope that it will be characterised by the entertainthat it will be characterised by the entertaining and pleasant features experienced on previous occasions. A session will be held at 10 a. m., Friday, February 24, for the reading and discussion of papers and for the transaction of necessary business, while in the afternoon a visit will be made to the Bureau of Printing and Engraving. All the sessions of the institute will be held in the National Museum building, and it is to be hoped that a large number of members and associates will be present. The Pennsylvania Railroad will sell excursion tickets to Wash. Railroad will sell excursion tickets to Washington from Pittsburg.

main line, and from Boston, New York,
main line, and from Boston, New York, Trenton and Philadelphia. These tickets can be bought only on the presentation of card orders, which are distributed, on application of members, by the secretary of the institute

#### The Proposed New York Iron Exchange.

At 3 o'clock on Wednesday afternoon large number of gentlemen connected with the iron and metal trades assembled in one of the upper rooms in Delmonico's Hotel, No. 2 South William street, to consider the ques-tion of organizing an Iron Exchange in New 2 South William street, to consider the ques-tion of organizing an Iron Exchange in New York. The call for this meeting was pub-lished in full in our last issue. When about a hundred gentlemen had gathered in the room, Mr. Judson called the meeting to order, and moved to organize by the election of Mr. E. S. Wheeler as chairman. The motion was carried with enthusiasm, and Mr. Wheeler took the chair. Mr. U. O. Crane was then the chair. Mr. U. O. Crane was then chosen secretary, and the meeting proceeded to business. The chairman read the call and stated that it had been thought that an Iron Exchange, if it were possible to organize one in New York, would conduce to greater harmony in the trade, prove serviceable to all covered in selling and buying icon. all engaged in selling and buying iron, save much valuable time in effecting transactions, and promote other good objects He called for a general expression of opinion, but most of the gentlemen present were apparently reductant to open the discussion.

To bring the matter properly before the

Mr. Judson moved that a com mittee of seven gentlemen in the iron and netal trades be appointed by the chair to mature a plan of organization and present it eting to be held two weeks hence.

Mr. Delafield advised that before the motion was put to a vote, there be a general expression of opinion. He understood the object of the meeting to be a general inter-change of views, and without such interchange the committee, if appointed, would find difficulty in maturing a plan likely to be acceptable

Mr. Flynn moved as an amendment, that the committee consist of fifteen instead of seven, as the meeting was a lage one, and a better expression of the views of the trade ould be had by thus increasing the size of the committee. Personally, he favored the the committee. Personally, he favored the idea of organizing an Iron Exchange. No other trade of equal improtance was without one. He thought it had become a necessity, and believed that the meeting would initiate a movement leading to the establishment of an exchange which would rank with the most important commercial exchanges in the Inited States. Mr. Flynn's motion to increase

the committee was seconded.

Mr. Judson opposed making the committee so large, unless the object of the motion was to kill the movement. He said that after long experience he had reached the concl He said that after a sion that a large committee was not needed and seldom did any practical work, while if the matter was left to a small committee, it would be much more likely to discharge the duty committed to it in a satisfactory and

orough manner, Mr. Flynn said that it was scarcely n ary for him to disclaim any desire to kill the movement. He thought that a com-mittee of seven gentlemen could not properly canvass the trade, nor could it properly include all the branches likely to be inter-

ested in the movement. A good deal of talk followed, and a motion was finally carried making the number of the committee nine as a compromise. The question now being the original motion to appoint such a committee, it was carried unanimously without discus

The chair then called for suggestions as to the composition of the committee and the instructions to be given it.

Mr. Delafield offered the following:

"Resolved, That it is advisable and proper that an Iron Exchange should be formed at this time."
He stated that this motion was introduced

to secure an expression of the sense of the meeting. He saw no reason why the exchange could not be formed out of the elements gathered at the meeting which would be strong and permanent. The advantage of an exchange seemed to him to be greater facility of communication between the differential security of communication between the different security of the sense of the meeting. of an exchange seemed to him to be greater facility of communication between the different branches of the trade, greater rapidity in effecting exchanges, and an enlargement of the scope of the trade. The rules adopted by such an exchange would add greatly to the stability of the iron business. Its arbitration committees would decide many questions which now lead to protracted litigation and much hard feeling. It would establish much hard feeling. It would establish regulations govering such intricate questions regulations govering such intricate questions as what constitutes No. 1 and No. 2 scrap. It would regulate, by a uniform system, brokers' contracts, and any contract made on the floor of the exchange would become binding between buyer and seller. For these and many other reasons he personally favored the Iron Exchange.

Mr. Robertsen thought it was taking the

Mr. Robertson thought it was taking the matter out of the hands of the gentlemen of the committee to anticipate their report by discussing the advantages of such an exchange. Mr. Delafield's motion was seconded, however, and seemed to be favorably regarded. garded

A gentleman called for the views of the pig iron manufacturers, if any were present. He thought it would be desirable and beneficial to know how they viewed the move-ment. The chair called on Mr. Brinsmade, of Edward Beck & Co., but that gentleman declined to speak. The question being called for, Mr. Delafield's motion was carried with

out opposition.

Mr. Thos. J. Pope was then called on for his views. He thought the exchange would be an advantage in many ways, primarily in establishing a standard of morality in business, and the settlement of disputes which can now only be settled before the courts.

Mr. Judson asked the chair to call upon Mr. Leech, Mr. Boynton and Mr. Robinson for their views. Mr. Leech, in response to the invitation of the chair, said he was still undecided as to whether the exchange would or would not be an advantage to the trade. or would not be an advantage to the trade. An exchange was, he thought, calculated to foster speculation. On the Froduce Exchange, the Cotton Exchange and the Oil Exchange, speculation was a prominent feature of the business transacted. If one of the effects of an Iron. Exchange would be to encourage speculation, he was satisfied it would be undesirable. The iron trade differs from many others. It has neglety salve in the same of the salve in the same of the salve in t undesirable. The iron trade differs from many others. It has no safety valve in a foreign demand. Speculation, if started here, would have to be worked out in this country, and he was not a little afraid that an Iron Exchange would lead to a speculation which could only be liquidated by the bankruptcy of the speculators.

Mr. Boynton was called upon and stated that, in his judgment, the object of an exchange was mutual protection and greater.

change was mutual protection and greater facility of communication. He was not cortain, however, that the iron trade was suffi-ciently concentrated to make it desirable to have an exchange in New York. He wanted to hear from representatives of Philadelphia, Pittsburgh and other cities on this subject. If an exchange was possible, he considered it very desirable—if, indeed, the iron trade is not an exception to other trades. sometimes thought it was an exception.

Mr. Robinson was called on, but had left

Mr. Evans was then asked to speak. He Mr. Evans was then asked to speak. He said he had not given the subject sufficient consideration, and had come to be instructed rather than to give his views. He knew nothing about exchanges, but thought an Iron Exchange would be of advantage if there was anything which could be dealt in on the floor. It would certainly call people together and perhaps accommodate some in the trade. For his own part, he did not think he could get any more for steel rails on Change there get any more for steel rails on 'Change than he could get in his office, and he rather expected that he would have the figures quoted on 'Change presented to him to see if he could do as well or better.

The chairman remarked that as Mr. Pope had suggested that one effect of an exchange would be to raise the standard of business morality in the trade, there would probably be less lying after it was organized than now. This remark was received with much

There being no further business before the meeting, a motion to adjourn, subject to the call of the chairman and the committee, was

carried, and the room was quickly cleared.
Mr. Wheeler presided with admirable promptness and dignity, and kept the meetpromptness and dignity, and soprement in grown falling into a snarl on questions of parliamentary usuge, which at one time seemed inevitable. He will appoint the comittee after careful deliberation, and include as far as possible all branches of the trades interested. The second meeting, to hear the report of the committee, will probably be held in about a fortnight. Due notice of the time and place will be given in The Iron Age.

Farming implements of American manu-Farming implements of American manufacture are rapidly finding their way to the agricultural districts of Europe. The British steamer Lord Collingwood is coming around from Baltimore to load here with a full cargo of agricultural implements for Sebastopol and Odessa on the Black Sea, in Russia. American reapers, binders and thrashing machines will be one of the sights to be witnessed in the grain fields on the Black Sea next season.

Gen. M. C. Meiga writes from Washington City to advocate the adoption by munici-pal fire departments of bows and arrows, with cord and rope, as a life-saving apparatus Compared with the cost of providing every lofty building with fire-escapes, the expense would be trifling.

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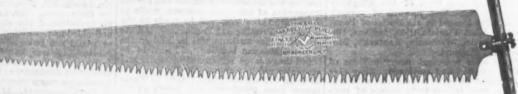
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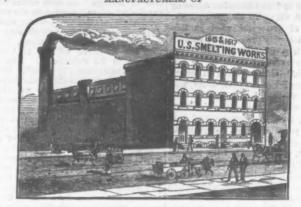
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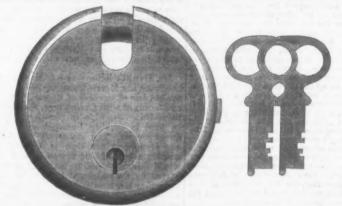
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### Thread.

On May 26th, 1868, the United States Navy On May 26th, 1868, the United States Navy Department adopted as a standard pitch, depth and form of sorew thread, what is known as the United States standard thread. Since that these much effort has been put forth by some of the most prominent manufacturers of sorew threading tools to cause this standard to be generally accepted to the displacement of what is known as the sharp V-thread. How far these efforts have been accepted is shown by the fact that a great majority of the bolts in use still have the old

The United States Standard Screw The first is obtained by dividing the depth ommended, on account of the difficulties of a sharp thread having sides at an angle of 55° to each other, into six equal parts, taking off one of these parts at the top and at the bottom, and joining the sides by an arc of a circle whose center is on the second line of division. The second is obtained by dividing the depth of a sharp V-thread, having sides at an angle of 60° one to the other, into eight equal divisions, and cutting off one of these divisions at the top and one at the bottom so as to leave a flat place at the top and bottom, and it is apparent to the eye that the straight sides of the United States standard V-thread. How far these efforts have been accepted is shown by the fact that a great majority of the botts in use still have the old form of sharp V-thread, and that this form of sharp V-thread, and that this form of thread is furnished unless the purchaser specially designates that he requires the United States standard thread.

In the discussion following Mr. Stetson's paper on "The Standard Sizes of Screw Threads," which was read before the first annual meeting of the American Society of Mechanical Engineers, held at New York in November, 1850, Mr. Stetson said: "Perhaps 80 per cent. of the taps and dies which we (the Morse Twist Drill and Machine Co.) sell are sharp threaded, and if we should fill orders with the flat top and bottom thread in comparison with the flat top and bottom thread in comparison with the flat top and bottom thread in the Common V-thread on a large scale, while a conclusion might have been reached, but as a conclusion might have been reached, but as continuous major the number of letters we should receive requesting us to send proper tools and not those flat top and bottom things. The ignorance of people in regard to this is extraordinary." It confined to length of thread and the Pusey, Jones & Co. form), and not thread sharp thread is discussed in United States standard thread in thread in the number of letters we should receive requesting us to send proper tools and not those flat top and bottom thread is consequence so far as the bearing and the Pusey, Jones & Co. form), and not the thread is contended to the united States standard thread is given to the rounded too the rou

with which its accurate production in the first instance is attended."

Referring to the first part of this paragraph, it is true that as the corners of the flat top an it is true that as the corners of the flat top and bottom thread wear they become more rounded, and degenerate toward the curve of the rounded thread, but that the words her, "other forms to which the same objection one spplies with equal or greater force," apply the the other forms that were considered by the and committee (as for example, the Briggs form the and the Pussy, Jones & Co. form), and not to the rounded top and bottom thread, is

from Sir Edward Reed, formerly chief naval constructor in the British Navy, approving the plans of the vessel.

#### The Attachment of Patents for Debt.

Perhaps no recent case in the county courts of Pannsylvania has been regarded with more general interest by the bar than the suit of Bakewell & Korr vs. Keller, the object of which was to determine whether, under the laws of Pennsylvania, a patent under the laws of Pennsylvania, a patent can be seized and sold for debt. The plaintiffs had obtained judgment against the defendant and a writ of h.  $f\alpha$ . was returned by the sheriff indersed "no goods." It appeared, however, that Mr. Keller was the owner of a patent for "an improvement in sand and gravel separators," an appliance used in dredging. It seemed probable that the sale of this patent would yield a sum sufficient to partially or wholly satisfy the claims of Messra. Bakewell & Kerr, and since neither the common law nor the statutes gave them the right to attach this since neither the common law nor the statutes gave them the right to attach this by any of the ordinary processes, they filed a bill in equity some time since, asking the patent to be surrendered to a receiver to be appoint to be surrendered to a receiver to be appointed by the Court, by an assignment duly executed by the defendant in accordance with the provision of a statute of the United States; this being done, the patent should be sold and the proceeds appropriately divided. It was, moreover, proposed that during these proceedings the defendant should be prevented from encumbering, should be prevented from encumbering, transferring, selling, assigning, or disposing of the letters patent in any manner. The court readily agreed to this last provision, and issued a preliminary injunction which was recently dissolved by decree. W. K. Jennings and Geo. H. Ohristy represented the plaintiffs, and W. C. Erskine and D. F. Patterson the defendant. At that time no opinion was filed, and considerable curiosity has been manifested since as to the grounds on which Index Staves head him of the products. has been manifested since as to the grounds on which Judge Stowe based his ruling. The opinion was not forthcoming until a few days a jo, a summary of which is given.

The bill alleges that plaintiffs are creditors of the defondant, and having obtained judgment, that a ft. fa. was issued, to which there was a return of nulla bona, and that the defondant is the avenue. the defendant is the owner of a patent right which cannot be seized for payment of debts. The only question that has given Judge Stowe any difficulty in this case related to the jurisdiction of the court under the facts set out in the bill. He has no doubt that in England and in the courts of the United States, where there is a general equity jurisdiction, such a bill would be sustained; in Pennsylvania, however, there is no equitable jurisdiction except where it is specifically granted, and the Constitution and the tion, to avoid the liability of overriding, and the wearing surface would be diminished." various acts of Assembly must therefore be considered to determine the authority of the court. The mere refusal to apply to the payment of a debt or judgment that which thread are strained to rupture, if the thread strips it may be said the nuts simply loosen. But it does not follow that the bolt would fall the law has not made the subject of seisure certainly cannot be called in any proper sense a fraud, either actual or constructive. out, though it might gradually work out. If the bolt should break, the liability to fall out It may be morally wrong, and even absolutely dishonest, but certainly not legally or equitably wrong under any proper definition of fraud. It seems, then, clear that no proper interpretation of the term "constructive fraud," however strained, can support the plaintiff's claim as set forth in his bill. So great majority of sorew threads are applied to wrought iron, while in most brasswork fine far as authority goes Judge Stowe has been unable to find any case where jurisdiction has been taken in such a case as this by any of the courts of the United States where there of the courts of the United States where there were not general chancery powers conferred by a special provision authorizing it. Creditors' bills against a debtor in his lifetime are defined to be a-bill filed by creditors who seek to satisfy their debts cut of some equitable estate of the defendant which is not liable to levy and sale under an execution at law, or cut of some property which has been put beyond the reach of ordinary legal process. The ground in the case of a pasent cess. The ground in the case of a patent right is the latter. It cannot be taken and sold under an ordinary execution. It is, however, legal estate or property, and not equitable. The foundation of the jurisdiction is no in equitable. The foundation of the purisdiction is no in equity seems to be not fraud, but the general power of the court to deal with equitable property and rights. Judge Stowe further to less says: "It is clear plaintiff cannot sustain his bill under the act of 1836 giving Common with Pleas courts jurisdiction in aid of execution;

any other property, either by clothing the courts with general chancery powers or by special legislative enactment, and it is reported that a movement will be made to have similar statute in Pennsylvania.

Burning of the Carthage Furnace.—
On Sunday, February 5th, the village of Carthage, N. Y., was the scene of considerable excitement, due to the burning of the Carthage Iron Company's furnace, the entire destruction of which, together with the loss of thousands of bushels of coal and the greater particle of the village was personned. committee a those made by instances a those made by instances and the following extract from their comparison, the tools should be alike in form and one are carefully made as the other. The committee appointed by the Franklin Institute to have assigned the Sellers thread as a standard, thread is first adopted the Sellers thread degenerate into the Whitworth of the surface of the Whitworth thread is the following particulars. The board is, however, must be discover that "the bears of the Whitworth thread is the following and the committee of the straight portion of the straigh

thage Iron Company will begin at once to re-build the destroyed portions, and, if the weather permits, the furnace will again be in running order in a short time.

#### An Italian Torpedo Boat.

A trial of a first-class torpede beat, built for the Italian Government by Mesers. Yarrow & Co., cf. Poplar, London, England, Yarrow & Co., cf. Poplar, London, England, recently took place at Westminster, and was attended by highly satisfactory results. It may be stated with regard to this vessel, that its speed is the highest ever officially recorded in any vessel afloat when fully equipped. It is, moreover, provided with an arrangement by means of which, if the stoke-hole became flooded, the fire would not be extinguished—a risk to which steamers are liable, and from which many have been lost. The vessel is very similar to many already sent by Messrs. Yarrow & Co. to the Mediterranean, all of which have reached their destination in safety. There are two ejecting tubes in the bow pointing directly forward, from which the Whitehead torpedoes are discharged by compressed air, and at a slight inclination. These boats are fitted, as usual in all those constructed by the above firm, with a bow radder in addition to above firm, with a bow rudder in addition to the rudder aft, not only for the cake of the rudder aft, not only for the sake or securing rapid maneuvering power, but to obtain perfect control when going astern being about seventeen knots. The power of steering rapidly is now looked upon by naval authorities as of the utmost importance, because, owing to the general adoption of machine guns on board all large war vessels, one great aim of the officer in charge of a torredo boat will, in future, be to keep his one great aim of the officer in charge of a torpede boat will, in future, be to keep his boat pointing toward the vessel attacked, so as to present the smallest possible area to the enemy's fire, and, immediately after discharging the torpedees, to retire with all dispatch by going astern, keeping the boat still pointed in the same direction, not steerstill pointed in the same direction, not steering round, which would present the entire breadside to the enemy's fire. The trial for speed was made at Long Reach a few weeks since, in the presence of Rear-Admiral Racchia, Captain Noce, and other Italian authorities, when the mean speed obtained, the boat being fully equipped with torpedoes, torpedo gear, &c., was 22.46 knots. The new arrangement recently patented by Messrs. Yarrow & Co., for preventing the fire from being extinguished by the influx of water in the stoke-hole, was tested by the Italian authorities on another occasion, and it was clearly proved that, with the stoke-hole and boiler compartment full of water, the boat still retained its steaming powers, and the experiment, which lasted two hours, was only stopped by the authorities being thoroughly satisfied with the value and success of the arrangement. In fact, the vessel could continue steaming a distance of at least forty miles, which would analy it to cess of the arrangement. In fact, the vessel could continue steaming a distance of at least ferty miles, which would enable it to reach a place of safety, or give time to repair the damage. While under way, a valve was opened in the boat's side, so as to give direct communication with the water, which was allowed to run in until its level in the stoke-hole and boiler compartment was practically the same as outside, and which was of necessity considerably above the furnace bars, and under ordinary circumstances the fire would have been extinguished long before this condition could coour. It was before this condition could occur. It was clearly evident that the boat could steam for clearly evident that the boat could steam for at least three hours without the fire requir-ing replenishing, which would enable it either to secure assistance or give ample time to get all the pumping arrangements to work, instead of being, as otherwise would have been the case, helplessly disabled, hav-ing no steam either to propel itself or to supply the steam pumps.

#### Electric Light Wires.

The question concerning the safety of buildings over the roofs of which electric-light wires have been stretched, was recently ngnt wires have been suretoned, was recently brought before the insurance men of Philadelphia. Inspector McDevitt, of the Fire Insurance Patrol, informed Atwood Smith, the president, that two electric light cables had been stretched across Market street to Hood, Bonright & Co.'s building above Rightly street, the connection with the line on Chesteret. objection to increasing the threat objection to increasing the threat with that finer threads would make the nuts less liable to alack back, a defect that is proved to be a serious practical difficulty with present pitches, and do away with the necessity of nut-locking devices in many situations. We are now able to produce true threads of any pitch without any danger of their overriding. The finer threads have the additional advantage that they are much easier to produce, requiring loss power to produce them and causing less wear to the shread-cutting tools. The angles of the sides of all pitches of the United States standard thread being the same (60° one to the other) it follows that their sides will, if placed coincident, be portions of a straight line, as the line A B lower's country, it is highly probable that a number of suits would concur. If the decision of the case, and the chances are the singular and the country of the insurance policies would be canceled. The insurance companies were strong in their before of the other court should be considered against in the patch of the court of the would be compelled to assume the risk of loss by fire or to pay largely increased rates of insurance. Mr. Montgomery, of the American Company, who is also a member of the Philadelphia Board of Underwriters' Committee on Electric Lighting, said that he considered the wires stretched from the Girard House to Hood, Bonbright & Co.'s Girard House to Hood, Bonbright & Co.'s building as especially dangerous to the houses over which they passed. The wires being made of copper, would sag with the weight of their length, and, in sagging, would rub against the roof of some building underneath and so cause an accident. By rubbing against an iron roof the insulating material, he thought, would soon wear off, and the next rainy day would ground the electric current with unpleasant results.

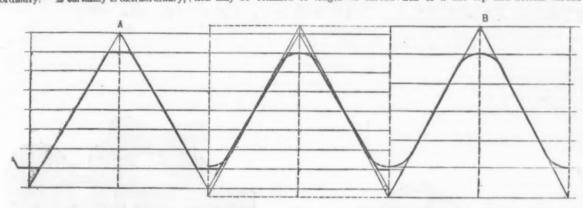


Fig. 1.—United States Standard Screw Thread Compared with the Whitworth Thread, Enlarged Sixteen Times

wher similar bodies. But many of those who are well informed, or may reasonably be supposed to be well informed, upon the question, have not a potential of the United States standard thread. Thus, Halls' Sons still use the Whitworth or Baglish form of thread, having a round top and bettem, with the sides of the thread at an angle of 55°, while Hoopes & Townsend have adopted a thread having an angle of 52°, and if we mistake not, even the Mosse Twist Parill and Machine Co. make other similar bodies. But many of those who Twist Drill and Machine Co. make many threading tools having the Whitworth thread. R. Hee & Oo. also use the Whitworth thread. In seeking a cause for this state of affairs, many practical facts may be found which tend to explain it. Some well-known mechanics who have had very extensive experience in the matter, express the opinion that a regard top and bettern is superior to a that a round top and bottom is superior to a flat one for a serew thread. Indeed, this seems to be generally admitted, notwith-standing that a flat top and bottom thread can be readily originated, whereas the orig-

considering the vast amount of effort that side in contact. The extreme depth or root bas been put forth by both the mechanical of the die thread does not, as before, pernewspapers and by the various societies, such as the Master Car Builders' Association, the Railroad Master Mechanics' Association, and the bolt thread cut to be of correct outside diameter, but above the standard diameter diameter, but above the standard diameter at the root of the thread, and as a consequence, as the threading tools wear, the threads bind on their tops and bottoms; hence it is found in practice, in all forms of thread, that after the threading tools have been in use some time, but long before they cease to out freely, the threads they cut bind on the top and bottom, which causes the curves to come in contact. This is recognised in the practice of our best mechanics, who find it necessary to depart from the standard form of thread sufficiently to avoid this evil. This is found to be essential even this evil. This is found to be essential even among the watch manufacturers.

among the watch manufacturers.

It appears, then, that the conclusions of the committee are in this respect incorrect, and that if they were correct the result would be to the advantage of the rounded top and bottom thread, assuming both forms of thread to be of equal depth. The internal standing that a flat top and bottom thread can be readily originated, whereas the origination of a round top and bottom thread is an operation requiring the most skillful manipulation. The rounded thread leaves the bolt the strongest and the cutting tools preserve these outting edges better.

On the other hand, the flat top and bottom thread may be out with a single pointed tool that can be made with care by an ordinary meshanis. The value of the two ferms of thread may not be properly com-

2.-Thread of an Inch Bolt.-United Fig. States Standard and Withworth

> pitches have been and are still used. pitches have been and are still used. As to cast iron, it is to be noted that the strength of the thread may be increased by increasing its depth, such being the actual practice, because in framing and in the other parts of machines made of cast iron, there is no objection to increasing the thread depths.
>
> From these considerations it is thought that finer threads would make the nuts less liable to alack back, a depot that is proved.

would require greater exactitude than at present exists in the machinery of construc-

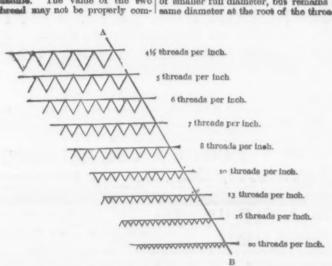
No reason is given why a bolt should be tronger than its thread. In case a bolt and

or come out would be greater, as the over-hanging weight of the bolt ends would permit

parts to become disconnected

In screws for machinists' use, which are pro-vided with slotted heads to receive a screw driver, finer threads are used, not only on account of their easier production in the screw-making machines, but also because they can be sorewed more securely home,-

Design for a New Armored Ship for



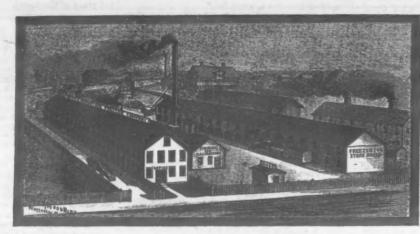
Phy. 3,-Comparison of the Pitches of United States Standard Threads for Boits from 2 Inches to 1/4 Inch in Diameter.

threading tools made by Whitworth himself, upon bolts, the thread is produced by the because it is a demonstrable fact that Whitworth's threading tools are not either of so worth's threading tools are not either of so desirable a form, so well made or so true to diameter as those made by first-class Ameri-To initiate a thorough an manufacturers.

pared by a comparison of a set of Whitworth | the case of the dies used to cut the thread is formed. That the board above referred to had some light upon this subject is indicated by the following extract from their



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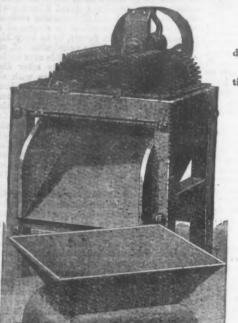


White Mountain Freezer ready to operate.

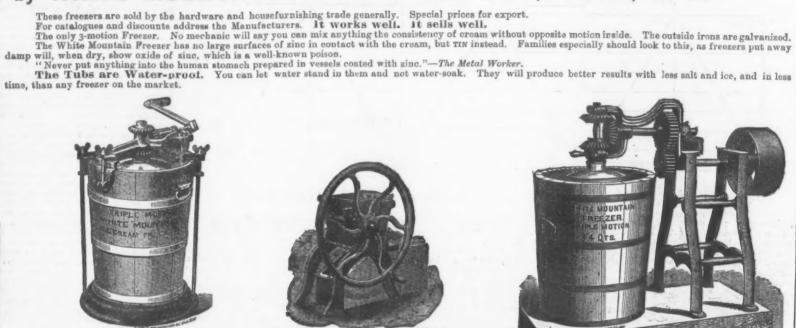
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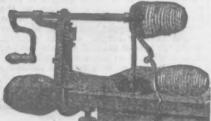
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Kansas City	801,600	Milwaukee	385,200
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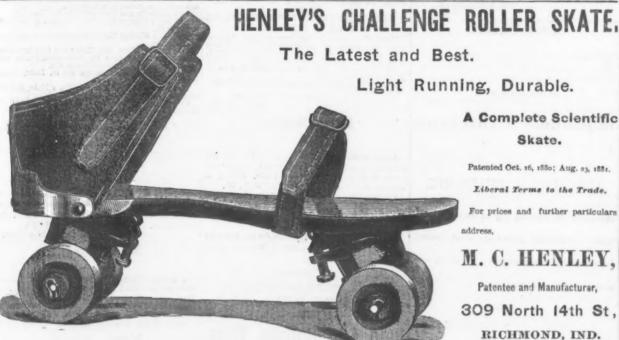
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HARDWARE DEALERS



four years, and the demand this year is fully BONNEY'S double that of any previous year. o are very few handler things to have a house, and no one, when once they have willing to part with it, of the No. 2 and Nos. 6, 7, 8 and 9 have Tem-Steel Jaws. Nos. 3, 5, 7 and 9 have our Swivel Jaw, by which all toper pieces can PATENT PARALLEL ISES



Mechanics, Jeweiers, Dentists, Printers, and general family use, they are just the thing, and in price within the reach

12 Different Sizes and Styles. From 154 to 254 inch width of jaws, and in weight from 1 to 5 pounds. Over 20,000 made and sold in the past four years, with continually increasing demand. We are the only ones making a line of cheap small Vises in America. We make, also, Farmers', Machinista' and Coachmater's, and Coachmater's, Machinista' and Coachmater's, and coachmater's and coachma

BONNEY VISE AND TOOL CO., 3015 Chestnut Street, Philadelphia, Pa.

## New York Club Roller



Easiest Working and Lightest.

Low Price and Excellent Quality. Also, Wood Top Roller Skates.





W. A. SUTTON. Manufacturer of Ice and Roller Skates. 522, 524, 526, 528 and 530 WEST TWENTIETH ST., NEW YORK.

THE DETROIT STAMPING CO., And other Sheet Metal Goods to order. Electro-plating in all its branches.



Steel Co. .

We have already noted the suit of Dr.

We have already noted the suit of Dr.

Siemens against the Merchants' and Manufacturers' Bank, growing out of the recent failure of the Siemens-Anderson Steel Co. facturers' Bank, growing out of the recent failure of the Siemens-Anderson Steel Co. Judge Collier on Saturday filed an opinion on the rule to show cause why the money realized from the sheriff's sale of the personal property of the Siemens-Anderson Steel Co. should not be paid into court, hold-Steel Co. should not be paid into court, holding that the executions are valid in the order of their issuing. After reciting the facts in the case, the Judge discusses the question of law involved. As the opinion is of interest to parties doing business in Pennsylvania, we give full extracts:

The counsel for the rule contend that the

money realized on the execution as aforesaid, should be paid into court and distributed pro rata among all the creditors, and this on the ground that the defendant is an insolvent ground that the derendant is an insolvent corporation. It is true that the assets of a bankrupt corporation are to be distributed equally ameng all the creditors pro rata. But upon what kind of insolvency is this predicated? Insolvency in fact or legal insolvency? In the case of an individual, the creditor may levy and sell his property until the debtor becomes legally insolvent by voluntary assignment. But does a different rule prevail as to selling the property of a private corporation, not being any part of its real estate, fixtures, franchise or plant. The act of June 16, 1836, 72d section, directs the manner of proceeding with executions. It holds, first, that the officer shall demand the amount, with legal costs, of an officer at the principal office of the rporation. It is true that the assets of a

shall demand the amount, with legal costs, of an officer at the principal office of the corporation; second, that personal property of the corporation sufficient to satisfy the debt can be seized if no person can be found upon whom demand can be made. The 73d section then provides that in case the execution shall be returned unsatisfied the court upon petition shall sequestrate the goods, &c., of the corporation, and the 74th section directs that the net proceeds shall be distridirects that the net proceeds shall be distri-buted among all its creditors as in case of insolvency of individuals. It will be seen that so long as there is tangible personal property levied upon sufficient to satisfy the plaintiff's judgment, there can be no legal insolvency. On this point the Supreme insolvency. On this point the Supreme Court in 1872, in an opinion delivered by Judge Thompson, said: "A return of the fleri facias pursuant to the 72d section of the act showing the demand without success and failure to find property liable to seizure and sale upon it, make way for the operation of the 73d section, and the creditor, upon petition may have a writ to accurate the tion, may have a writ to sequestrate the goods, &c." But it is thought that the act of the 7th of April, 1870, helps the contention goods, &c." But it is thought that the act of the 7th of April, 1870, helps the contention of the counsel for the rule. The provisions of that act are that the plaintiff may issue a writ of fieri facius, instead of applying to the court for a writ of sequestration. It only directs the judgment creditor to issue an alias f. fa. instead of proceeding by sequestration. The Circuit Court of the United States held that this act did not repeal the 72d section of the act of '76. "When the execution is returned unsatisfied in whole or a part, then begins the proceedings in sequestration which the act of '70 was designed to supplant."

Even these statements it seems reasonably

supplant."
From these statements it seems reasonably From these statements it seems reasonably clear. First, that the sheriff in levying upon the personal property of the defendant corporation under an ordinary fl. fa. has proceeded in strict accordance with the directions in the 72d section of the act. Second, that until there is a return of nulla bona, a return that the execution is unsatisfied in whole or in part and an alias, ft. fa. is issued by the plaintiff under the act of 1870, the contestants have no standing to ask distribution in this proceeding as in cases of insolvency. It follows that the rule must be discharged.

Steel and cuttery as compared with the corresponding quarter of 1880, although, as we have said, the gross increase is large (£63,-511). The returns for the last quarter of 1881, with the totals for the corresponding quarter of 1880, are as follows:

Steel Cuttery.

Total. discharged.

#### LABOR AND WAGES.

The Waverly Coal and Coke Company, near Pittsburgh, who recently entered suit against D. R. Jones, the miner's secretary and the proprietors of the Labor Tribune, have filed their charges. The charges are conspiracy and libel. Damages to the extent of \$20,000 are asked on the first count; that the defoudants comparing to injure the that the defendants conspired to injure the business of the plaintiff, and \$50,000 is asked as compensation for injury and was occasioned by the publication of libelous articles in the Labor Tribune and Commerarticles in the Labor Tribune and Commercial Gazette. At the time of the several grievances committed by defendants the business of the Waverly Coal and Coke Company was conducted on the co-operative sysby which the miner receives one-half bands of idle men to lounge around the com-pany's works, thereby creating confusion and disorder; that threats were frequently made on the lives of such of plaintiff's em-ployees as proposed to work; that by dis-seminating false and libelous utterances re-garding the plaintiff company and the quality of its coal, great injury was done to the complainants. Further, defendants assumed to control the market for disposal of the product of the company, and persisted assumed to control the market for disposal
of the product of the company, and persisted
in keeping up the same conspiracy and evil
intent after D. R. Jones, one of the present
defendants, and Hugh Anderson were convicted and punished therefor in the Westmoreland County courts. The result of the
litigation will be looked for with great interest, and the array of legal talent on both sides indicates that the suit will be thoroughly

or less extent in some of the rolling mills and steel works not five miles distant from 3 e ir office. That is to say, a heater having two or three furnaces or a roller twe, three or four trains of rolls under his charge. And this is tolerated by the association in the face of the constitution strictly forbidding is where it is practicable to enforce this law. If the association ways it is not recticable. If the association says it is not practicable to enforce it in this district they admit their weakness, and should wipe it from the constitution, and let every man take as many jobs as he can get in one mill, while other good and true men must walk the streets in idleness." The Tribune says of this: "The above communication is published for the purpose of giving these men a fair hearing. We, however, positively dissent from the practice of bringing such matters before the general public. It is a matter that should be settled in the lodges, and its discussion there should be free and full."

The blast furnacemen in Chicago and circinity are out in advertisements and cir-

vicinity are out in advertisements and circulars warning their Eastern fellow craftsmen that a strike is in progress there, and for them to refuse all offers of employment from agents hailing from that section.

Workmen at the Pullman shops, near Chicago, had an indignation meeting last Saturday, the complaint being that while they have been receiving but \$2 per day, a practical reduction has been made to \$1.90 by the new order refusing them tickets to and from the city. They claim that this move on the part of the Pullman Company is to compel them to move to Pullman and live in the Company's houses, on which the rent has been raised from \$10 to \$17 per month. Numerous other complaints were made. There are 4000 to 5000 men employed at the There are 4000 to 5000 men employed at the Pullman shops more or less interested. There was a reaction in the building busi-

ness last fall at Pittsburgh, and masons and stonecutters were subjected to a reduction in wages, which they now wish to restore to the rates generally ruling last season. There are 700 stonecutters in the two cities of Pittsburgh and Allegheny. Ordinary mason's wages are \$2.25 to \$2.50, and those more skilled receive from \$2.75 to \$3.75. The ex-perts, of which there are nearly a hundred, for fine work receive from \$4 to \$5. The demand of the cutters now is an increase of

The North of England Board of Arbitra-tion have granted the ironworkers 7½ per cent, increase of wages. The representa-tives of the latter expressed their satisfac-

is a considerable increase on the month of December, there is a falling off in steel as compared with the corresponding month of 1880, though there is an almost equally marked increase in the value of cutlery. For the quarter there is a decrease in both steel and cutlery as compared with the corresponding quarter of 1880, although as well.

1881. October	8tc		d. 8	E 23.713	s.	d. 836	Tot £ 77,766	al.	d.
November. December.	34,467			25,131	5	0	138,971		3
7	£91,223	5	X	£69,231	19	136	£304,977	13	936
183a. October November December.		3. 3. 17	d. 8 1	26,197 25,068 21,815	8. 0 8 8	d. 5. 7. 436	98,770 65,299 77,337	M 0 000	d.
							£241,406 1881 a		314

31,623 13 3 25,772 13 10 27,740 9 8 25.713 7 83, 34,007 19 11 20,387 11 9 29,414 15 6 25 191 1 9

£391,137 6 6£314,191 17 136£1,462,067 0 20 tem, by which the miner receives one-half the price the coal sells for after deducting cost of transportation. It is claimed that the defendants incited the miners to discontent by inflammatory speeches against the co-operative system, and induced several in leave their employ, and by advertising to the public prints induced other miners to keep away from the plantiff's works. It is further charged that the defendants aided and abetted, with money and provisions, bands of idle men to lounge around the company's works, thereby creating confusion is seen to consider the defendants and the company's works, thereby creating confusion is seen to consider the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for after deducting to the price the coal sells for a first and the price that the defendants incited the miners to discontent the coal sells for a first and the price that the price that the defendants are selled trade with the United States touched its highest point (£1,734,628). In 1873 it was £1,659,773; in 1874, £1,263,048; in 1875, £475,650; in 1876, £475,650; in 1877, £470,—594; in 1876 (£475,650; in 1877, £470,—594; in 1876

The question of the liability of a patent right to be sold by the sheriff under proceedings for debt, was lately decided by the Supreme Court of the District of Columbia and the Court of the District of Columbia and the Supreme Court of California. Both decisions are to the effect that although an ordinary sheriff's sale of a debtor's patent right would be good for nothing, a court of equity, when proper supplementary proceedings have been taken, may compel the debtor to make an assignment of the patent for the benefit of his creditors, and in default of such assignment within reasonable time, may appoint a trustee with power to execute the assigntrustee with power to execute the assign

GEO. M. EDDY & CO.,

Manufacturers of

Measuring Tapes

of Cotton, Linen & Steel,

ALL PURPOSIME.

ALL PURPOSIME.

351 to 363 Classon Ave. Brocklys, N.Y.

est, and the array of legal talent on both sides indicates that the suit will be thoroughly contested.

The mills considered on strike by the Amalgamated Association are Zanesville and Wellsville, Ohio; W. D. Wood & Co., Mc-Wellsville, Ohio; W. D. Wood

#### Special Notices.

SECOND-HAND AND NEW

### Machinery.

FEBRUARY 13, 1892.

The following new and improved Machinists Tool was part of what we have for early delivery:

3 ps in. x to in. x of it. x of it. Planers. New. March.

2 oin. swing, 15 ft. bed, Engine Lathes. February,

2 to in. swing, 15 ft. bed, Engine Lathes. February,

3 is in. swing, 15 ft. bed, Engine Lathes. February,

3 is in. swing, 15 ft. bed, Engine Lathes. February,

2 to in. swing, 15 ft. bed, Engine Lathes. February,

2 to in. swing, 15 ft. bed, Engine Lathe. New.

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2 to in. swing, 15 ft. bed, Engine Lathe. New.

4 to in. swing, 15 ft. bed, Engine Lathe. New.

4 to in. swing, 15 ft. bed, Engine Lathe. New.

4 to in. swing, 15 ft. bed, Engine Lathe. New.

4 to in. swing, 15 ft. bed, Engine Lathe. New.

4 to in. swing, 15 ft. bed, Engine Lathe. New.

4 to in. swing, 15 ft. bed, Engine Lathe. Show.

4 to in. swing, 15 ft. bed, Engine Lathe. Ad hand.

17 in. swing, 15 ft. bed, Engine Lathe. 2d hand.

17 in. swing, 15 ft. bed, Engine Lathe. 2d hand.

12 in. swing, 15 ft. bed, Engine Lathe. 2d hand.

12 in. swing, 15 ft. bed, Engine Lathe. 3d hand.

12 in. swing, 15 ft. bed, Engine Lathe. New.

3 to in. swing, 15 ft. bed, Engine Lathe. New.

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5 to in. swing, 15 ft. bed, Engine Lathe.

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2

The George Place Machinery Agency

121 Chambers and 103 Reads Sts., New York.

#### For Sale.

AM the Pixtures at the PLYMOUTH FOUNDRY, CONSHOHOCKEN, PA., for the manufacture of modern lengths of cast-iron Pipes, consisting of Flashs, Patterns, Melding Machine, Core Barrels, Gore Cylinders (wrought iron), Testing Presser Tarring Tanks, Oupolas and Ladles, Blowing Engires and Steam Cranes, Engines and Crane made by Peeple's Works, Philadelphia. Apply to L. & R. WISTER,

see South 4th Street, Philadelphia SHIMER & CO.,

ese South 3d Street, Philadelphia.

#### For Sale.

Two large Screw Planing Machines one 70 inches wide by 11 feet long, and one 38 inches by 14 feet, both fitted with cross and down-feeds, quick return, &c. and in excellent order. Could deliver in JOHN GRAY, about two weeks. 37 Dey Street.

### DESIGNING

of Rolls for every kind of shape, and iron or steel also trains and other mill work; furnishes quick and on reasonable terms.

> GUSTAVE LINCKE. Pittsburgh, Pa.

#### LARGE ENGINE LATHES FOR SALE.

One Lathe, 1s ft. bed, 24 in. swing, serew outting. sriple gear, compound rest, with cross-feed.
One Lathe, so ft. bed, 25 in. swing, back gear, conspound rest, cross and angular feed.
One Lathe, 1s ft. bed, 25 in. swing, back geared.
These Tools are in use, and can be soon at our

factory.
THE STILES & PARKER PRESS CO.,
Middletown, Con

#### Salesman Wanted.

One thoroughly familiar with Builders' Hard ware and willing to travel. Apply by letter only, stating experience, references, age and salar HOPKINS & DICKINSON MFG. CO.,

#### Wanted Immediately.

Ten tons Light Rails, with Fish Plates and Bolts either 16 or 25 pounds per yard. A good second-hand rail will answer. Address, with price and where delivered, H. A. AYER, Dexter, Me.

#### Wanted.

Combination Power Punch and Shear to punch M hole in M from and shear flat bars. Also one to shear % round from and punch flat bars. THOMPSON BROS.,

110 Bread Street

Philadelphia. WANTED.—A Roller for nine-inch mid and two Heaters. None but strictly temperate men need apply. References as to ability and habits required. Liberal pay guaranteed. Address MYRACUSE IBON WORKS, Syracuse, N. Y.

W ANTED.—By a young man with four years' apperieuse in shelf and heavy Hardware, a position as stockheeper, salesman or bookkeeper, or would sell goods on the road. East preferred. Address H. J. F.,

Office of The Iron Age, 83 Beade St., New York.

#### Special Notices.

Second Hand and New

#### MACHINERY.

FEBRUARY 15, 1882.

ne Car Arie Lathe. Hewes & Phillips. New.
10 Empine Lathe. 55 in. x 124 ft. A1 order.
20 Empine Lathe. 55 in. x 124 ft. A1 order.
21 Empine Lathe. 55 in. x 126 ft. A1 order.
22 Empine Lathe. 56 in. x 12 ft. Fifteld. New.
23 Empine Lathe. 56 in. x 12 ft. Fifteld. New.
24 Empine Lathe. 52 in. x 12 ft. Fifteld. New.
25 Engine Lathe. 52 in. x 12 ft. Fifteld. New.
26 Engine Lathe. 52 in. x 12 ft. Fifteld. New.
26 Engine Lathe. 52 in. x 12 ft. Fifteld. New.
26 Engine Lathe. 52 in. x 12 ft. Ames. New.
26 Engine Lathe. 50 in. x 12 ft. Ames. New.
26 Engine Lathe. 50 in. x 12 ft. Ames. New.
26 Engine Lathe. 52 in. x 15 ft. Ames. New.
26 Engine Lathe. 55 in. x 15 ft. Jones & Lamson.
27 Ft. Birthol. Lathe. 15 in. x 15 ft. Jones & Lamson.
28 Engine Lathe. 15 in. x 15 ft. Jones & Lamson.
28 Engine Lathe. 57 in. x 15 ft. Jones & Lamson.
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28 Engine Lathe. 57 in. x 15 ft. Jones & Lamson. One Engine Lathe, is in. x 9 ft. White'b. Good order. Three Engine Lathe, is in. x 8 ft. Jones & Lamson. New.
One Engine Lathe, is in. x 6, 7 and 8 ft. Bridgeport Moh. Tool Works New.
Six Engine Lathe, is in. x 6 ft., 7 ft. x 3 ft. Ames. New.
One Engine Lathe, is in. x 8 ft., Fratt & Whitney.
One Engine Lathe, is in. x 8 ft. Fratt & Whitney.
One Engine Lathe, is in. x 6 ft. Star Tool Co. New.
One Engine Lathe, is in. x 6 ft. Hand. New.
One Engine Lathe, is in. x 6 ft. Hand. New.
One Engine Lathe, is in. x 6 ft. Ames. New.
One Engine Lathe, is in. x 5 ft. Ames. New.
One Engine Lathe, is in. x 5 ft. Lincoln.
Two Hagine Lathes, is in. x 5 ft. Lincoln.
Two Hand Lathes, ii in. x 5 ft. Loo Shaper. Some Flaner, if in. x 5 ft. One Flaner, if in. x 3 ft. New Spenoar.
One Planer, if in. x 3 ft. Thayer & Houghton.
One Planer, if in. x 2 h. Mey Eaven. Good order.
One Scrow Eschline Wire Feed. New.
One is in. Stroke Shaper. Gould & Eberhards. New.
One is in. Stroke Shaper. Gould & Eberhards. New.
One 2 in. Upright Drill. New Haven. New.
One 2 in. Upright Drill. New Haven. New.
One 3 in. Upright Drill. New Haven. New.
One is in. x 5 en. Dudgeon Steam Hammer.
One is in. x 5 en. Dudgeon Steam Hammer.
One is in. x 5 en. Dudgeon Steam Hammer.
One is in. x 5 en. Dudgeon Steam Hammer.
One is in. x 5 en. Dudgeon Steam Hammer.
One is in. x 5 en. Dudgeon Steam Hammer.

E. P. BULLARD, 14 Dey St., New York,

GENERAL EASTERN AGENT FOR

Akron Iron Co.'s Patent Hot Polished Shafting.

#### Wanted.

A second-hand Rotary or Crocodile Squeezer for Puddle Mill. Name cash price f. o. b. cars, with description. Address PHIENTX IRON CO.,

410 Walnut St., Philadelphia.

#### Wanted.

A second-hand Steam Engine, of standard make and in good order, about 60 to 80 horse-power Address, with name of maker, condition, size and price, POST OFFICE BOX 597,

#### Wanted.

An old botier shell, suitable to construct into a foundry augola; diameter not less than 45 inches or over 47 inches; length not less than 50 feet or over 30 feet. Name cash price, f. o. b. cars.

Address

Lensdate, Penn.

#### Wanted Immediately.

A competent man to run an air furnace to make beavy castings and rolls. One who thoroughly understands the business can get good wages.

Address
POPE IRON AND METAL CO,
Nt. Louis, Mo.

#### Wanted.

A soft-coal burning, Consolidated or Tank Locomotive of about at tons, six-wheeled, coupled with
pony truck; tank capacity, I ton of coal and roco
galls, water; dis, of cylinders, I & X & In., or
thereby; driving wheels 36 in, dis., closely coupled
with trailing wheels behind furcace. Weight distributed as follows: Truck, 54 tons; tank, 44
tons; driving wheels, 20 tons. Straight botter
preferred. Address.
WALDENS RIDGE RAILROAD CO.,
Jenks P. O., Roane Co., Tenn.

#### Wanted.

A live man to assist the proprietor in a general line of Wholesale and Retail Hardware and Agricultural Implement business. Must be a good bookkeeper and financier, and have some experience in the business. First-class references required. A single, middle aged man preferred. Farties expecting a big salary need not answer this Address ASSISTANT.

Office of The Non Age, 83 Reade at., New York.

#### Nail Mill Man Wanted.

A thoroughly competent, experienced man wanted as Superintendent or Manager of a firstclass Nail Mill in a Western city. None others need apply. Address, with references,

G, Letter Box D, Cincinnati, Ohio

W ANTED.—A gentieman residing in Texas de-sires to represent one or two manufacturers or j-boers of Builders' Hardware and Mechanics' Tools or general Hardware, on salary or commis-sion. Has had fifteen y-arm' experience in this line of trade, and is well posted also in cutiery, guas, ammunitos, paints, olis and brushes. Good references will be given in New York City or St. Louis. Address LOGK BOX 524, Wsoo, Texas.

WANTED.—Position as Superinteneent or Mills Wanagur; have had twenty-five years' practical experience; have had twenty-five years practical experience; have had twenty-five years been manager in iron and steed rail mill, merchant bar and guide mill and railroad supplies; will take position in works now running or with parties about to build new works. References given from present position. Address Managek, Box Z, Office of The Iron Age, 83 Reade St., New York.

A THOROUGHLY EXPERIENCED SALES-MAN, fully acquainted with Pig and Manufactured Iron trade, also practical mechanical knowledge of Pumps, Engines and Machinery, with extensive acquaintance with best trade in Middle and Western States, is open for engagement with first-class Commission or Manufacturing House, on good salary or paying commissions. Address, with name and particulars, "EXPERIENCE," Box 60, Office of The Iron Age, 83 Reade St., Now York.

WANTED—Employment in the Hardware trade (wholesale preferred), in a Western or South orn State. Have had nine years' experience in re-tailing Hardware and Stoves. Am young, and not afraid of work. Can give the best of references. Address L. O. WALKER, Indianola, Iowa. WANTED.—A position as Traveling or Store
Saleeman by a young man thoroughly posted
in shelt and heavy hardware, from the plate and
metals. Address
Office of The Iron Age, 220 S. 4th St., Phils., Pa.

CLERK WANTED.—By a Retail Hardware House in New York City. One having had some experience in New York City. One having had some experience in the Hardware trade preferred. Address by mail, with reference, D. W. & CO.,

Office of The Iron Age, so S. 4th St., Phila., Pa.

PRILL PRESS FOR SALE.—A new Upright Fower preferred. D. D. Press, average 2 inches, back genred, quick return motion, seel at indice and shift superior flaints, the process of the Iron Age, so S. 4th St., Phila., Pa.

Office of The Iron Age, so S. 4th St., Phila., Pa.

D. D. Press, average 2 inches, back genred, quick return motion, seel at indice and shift superior flaints, freet, price 4 to.

Parallele Punc H. AD SHEAR CO., 15 W. Liberty St., New York.

#### Special Notices.

TRUSTEES' SALE OF

#### WORKS GEORGIA IRON PROPERTY.

In obedience to a decree of the Superior Court of Fulton County, Ga., in the cause of G. J. Foreare and Wm S. Thomson, trustees, against the Georgia Iron Works, we will sell on the premises, at public outory, on WEDNESDAY, the first day of March, 28z, beginning at 10 o'clock a. m., the following property of the Georgia Iron Works, to wit: All that tract or parcel of land containing twenty-five acree, more or less, in the city of Atlants, and in land lot eighty-two (3a), of the 14th district (formerly known as the Atlanta Rolling Mill property), together with all the improvements thereon, consisting of the furnaces and ruins of a large rolling mill which was destroyed by fire, a large two-story stone foundry building, machine shop, office and dwelling-houses. Baid real center will be subdivided into lots, plats of which will be distributed on day of sale, or furnished on application in the meantime. Also all the machinery, patterns, teols, boliers, engines, scales, trucks, &c., of the Georgia Iron Works now on said premises. The terms of the sale will be cash, and as the decree provides as follows: "In making the sale that trustees, after receiving sufficient cash to pay off the liens having priority, or claiming phority, over the mortgage bonds, may receive in payment for said property the bonds nearest by said mortgage at the amount to which they will be entitled upon the distribution." We will, in obedience to said clause of the decree, require but twenty per cent. of the purchases made by the holders of said bonds to be paid in cash, and the balance in said bonds to be paid in cash, and the balance in said bonds to be paid in cash, and the balance in said bonds to the purchases made by the holders of said bonds to the purchases made by the holders of said bonds to the purchases made by the holders of said bonds to the purchases made by the holders of said bonds to be paid in cash, and the belance in said bonds to be paid in cash, and the belance in said bonds to be paid in cash, and the belance in said bonds

#### For Sale.

A complete stock of

BUILDERS' HARDWARE

and

#### AGRICULTURAL IMPLEMENTS.

situated in the growing city of BRIDGEPORT,

CONN. Clean stock, good trade, good location.

On account of poor health will be sold on easy

terms. Address communications to SARGENT & CO.,

New Haven, Conn., or

SARGENT & CO.,

#### For Sale.

A Valuable Iron Property, ENOWN AS THE

### POMEROY IRON WORKS.

Located at the junction of the Housatonic and Boutor and Albany Railroads, in Week Stockbridge, Mass Tracks from each road into the furnace yard. This is the only Anthracite Furnace in Now England. Product finds sale to the local trade; make about 8500 tone per year. Reputation of the Iron first-class. The quality of the Oras of the violaity second to none. Daily shipments are made from the town to the Hudson River Furnaces at Troy and Hudson Furnace fully equipped with Tools. A small outlay will put the Furnaces to blast. The Ore Rights and Lime Quarry (the latter on the premises), with the Tools, 48 acres of Land, Tenant Houses and Barns will be included in the sale. For tearns apply to WM. TURNEULL.

Trustee of the late Theo. Fearnery's Essate, 57 and 59 Work.

For further particulars, address or call on W. M. KNIFFIN, On the premises.

#### For Sale.

Four small Power Punching Presses, in firstclass order. They are to set on workbench. Price \$75 each (cost \$150), PEERLESS PUNCH AND SHEAR CO.,

115 W. Liberty St., New York.

#### For Sale.

Two hundred tons clean new Scale from forge rolls and squeezer, where scrap and muck bar is made, Address

COBB'S IRON AND NAIL CO. Aurora, Indiana,

#### For Sale.

A Hardware Manufactory, at Westville, Conn., consisting of Foundry, Machine Shop, Storehouse and other buildings; also Water Power. Engine, Boiler, Futterns, Tools and Machinery used in the same. Address

THE BLAKE HARDWARE CO,
New Haven, Conn.

THE NEW ENGLAND

Manufacturers & Mechanics' Institute will hold their Second Annual Exhibition at Bosten, in their specially constructed Exhibition Building, the largest in the United States, during "NEP'EMBER AND COTOBER, 182".

Exhibitors invited from the whole world. Blank forms of applications for space sent upon application to JUHN F WOOD, Treasurer, 38 Hawley Street, Boston, Mass.

A Rare Chance for a Manufacturer. To lease for a term of years, at Milton-on-the-Hadson, a good Water-rower, with Buildings, which have been used as a Foundry and Machine Shop very successfully. Five minutes from the steamb.at landing. Address JOHN 8 BALL. Milton, Ulster Co., M. Y., or HBNRY DIOKINSON, 243 Broadway, New York.

#### Special Notices. For Sale.

The Little Schuylkill Rolling Mill, at Mildale, Schuylidil County, Pa., near Port Cita-ton, on the line of the Philadelphia and Reading Railroad, consisting of a Merchant Bar Mill in complete running order, with a splendid water

power sufficient to run the mill two-thirds of the year. Engines, Boilers, Foundry and Machine Shop, with Lathe for turning rolls, and all other appurtenances necessary to commence operation at once. Tegether with dwellings, stables and large tract of land, to be sold low if applied for soon. For further particulars address or apply to J. O. RICHARDSON, No. 252 Dock street, Philadelphia.

Bolt and Nut Machinery, &c., for Sale. One-Header, Lewis Oliver & Phillips, second-Two-Header Burdick Forged Headers, second hand. Two-Header Lowell Forged Headers, second-

Annu.

Two-Header Leweil Forged Headers, secondhand.

One Cold Upsetter or Header, Chapin make,
second-hand. Wilkhead 6-in. long by 3-6 open dies.

Two Key-Seat Cutters, most improved style,
second-hand.

One Double-Punch and Shears. Alistatter No. 7,
second-hand.

One Double-Bolt Cutter, Smith maker, little used,
Alse our full line of National Machinery Co.'s
manufactures: Hot-pressed and Hot-forged Nut
Machines; Bolt Cutters, National Head, 8 sizes;
Double-Bolt Cutters, Tappers, Headers, Washers.
Bivet, Track Bolt, Pointers Burrers, and full outsits for Bolt and Nut manufacturers. Address
NATIONAL MACHINERY CO., Cleveland, Ohio,
the only Specialists in the United States. DESIRABLE MANUFACTURING SITE

### For Sale or Rent.

Being the extensive property formerly occupied by the BUFFALO IRON AND NAIL WORKS AT BLACK ROCK, IN THIS CITY.

The buildings cover over three acres, and are of brick and wood, substantially constructed, and with slate roofs. They could easily be changed, if necessary, to suit aimest any kind of business. Water and ratiroad communication to all parts of the country.

Maps of the property, with full description, sent on application.
P. P. PRATT or F. L. PRATT,
Buffalo, N. Y.

#### For Sale.

A piec, clean stock of Hardware and Stoves in a town of roco inhabitants in Eastern Illinois. Only stock in town, and good cash trade. Selling on account of sickness. Address W. R. W., coount of sickness. Address W. R. W., Office of The Iron Age, \$3 Reads St., New York.

### Press for Sale.

New No. 7 Open Back Trimming Press, made by Farrell Foundry and Machinery Co. For price, dimensions, &c., address

BEECHER & PECK.

#### Lock Box 192, New Haven, Conn. For Sale.

Palo Alto Rolling Mills,

Near Pottsville, Pa., On the Main Line of the Pottsville and

Reading Railroad.

These mills are in good repair, and can be started in two days' time.
Rolls for T-Rails as to 70 lbs, per yard, and for Street Rails as to 70 lbs, per yard, and for Street Rails as to 70 lbs, per yard, and for Street Rails as to 70 lbs, per yard, and for Street Rails as to 70 lbs, per yard, and for Merchant Iron 14 to 1 lnch, Rolls for Morchant Bar, round and square, up to 446 inches.

Number of Puddling Furnaces in both mills, 30; Heating Furnaces, 9; all with bollers attached.
Also, Foundry, Machine Shop, Elacksmith Shops, Iron House, Roll House, Carpenter and Pattern Shops, Stables, Handsome Dwelling for superintendent, 11 Tenement Houses, a Brick Office, and ample grounds for stock and cinder.

For further particulars address

Messrs. LEE & McCAMANT. Extrs., Pottsville, Pa.

THOS. F. WRIGHT, 1804 Race st., Philadelphia, Pa. HUGH W. ADAMS, 56 Pine st., New York.

#### For Sale.

A Valuable Charcoal Iron Property. A Valuable Charcoal Iron Property,
Located on the James River, io miles south of the
Chesapeake & Chio R. R. at Williamson, known as the
SALISBURY FURNACE, on the Richmond & Allegheny
Railroad, at which place there is a Railroad Station,
a Post office and Telegraph Station. The property is
composed of 3000 across of land. At the furnace there
are five family houses, a grist mill and a store house
ready supplied with goods for the work hands and
the country round about, also a stable, blacksmith
and wagon shop. The ore is taken from a tunnel in
the mountain in tramway cars and dumped into a
funne which runs down to the foot of the mountain in
water is brought along the side of the mountain in
a flams to where the ore is dumped, and before it
roughly washed.

The mountain the ore is thore
and the control of the mountain in the first of February. It has made in this blact
about the first of February. It has made in this blact
about the first of February. It has made in this blact
about the first of February are wheel iron. The
property will be sold on easy terms.

Apply to EUGENE KELLY,
Ann. 7, 1882.

#### For Sale.

One Beam Engine, s5 x 48, in first-class condi tion in every respect, patent cut-off, Shive gover-nor, exhaust pipe heater, 18-feet fly wheel, &c., all complete. Price \$1200; easy terms.
SHIMER & CO.,
250 South 3d st., Philadelphia.

#### FOR SALE.-MINE CARS.

Fifty Mine Cars for 3 ft. 6 in. track; are end dumps of most approved pattern, strongly built, and fitted with the Thomas self-olling chilled wheel, capacity about si tons. Will be sold cheap. Address

JAMES E. THOMAS, Newark, Ohio.

#### For Sale.

On reasonable terms, a first-class Iron and Brass Foundry, with full equipment for making light and heavy castings of all kinds; powerful cranes, oupoles, coses, &c., with a heavy stock of patterns. Located in Philadelphia, Pa. Apply to WM. KRNST.

727 Walnut St., Philadelphia, Pa.

DUNCHING PRIMES AND SHEAR FOR SALE—A Bollermaker's Punching Machine, 24-inch throat, punching 4-bole in 4-iron. Also a Power Sheer; will shear 4 plate-iron 44 inches in widts. Weggist, 400 pounds. PEERLESS PUNOH AND SHEAE CO., 115 W Liberty Street, New York.

#### Special Notices. JOB

LOT. **ELEY BROTHERS'** 

### GENUINE BLUE CARTRIDGE CASES.

Twelve Gaugo. The best paper shell in the market. For sale

heap. Supply limited. ALFRED FIBLD & CO.,

98 Chambers St., N. Y.

### E. BISSELL & CO.,

Wholesale Hardware Auctioneers. 83 Chambers and 65 Reade Ste., N. Y. Sales held weekly for the trade. Gensignments olicited. We refer to the leading Manusectures

ROBERT R. HAYDOCK & CO.,

Auctioneers & Commission
Merchants,
No. 75 Merchants,
Belief consignments of
Hardware, Cutory, Stamped Three's, New York,
fursishing Goods, da, for Side by Auction.
Terms and further information may be had by
addressing F. O. Box 1060.

## Bolt, Nut and Washer Machinery For Sale.

Six 144-in. double-head Bolt Quiters with ausematic stop, and powerfully geamed, and particularly adapted to cutting Track Belts or large quantities of Bolts of various sizes.

Four 44-in. double-head Bolt Sutters, the same as are used in all large bolt factories.

Two 4-spindle and One 6-spindle Nut Tappers.

Two No. 2 Washer Machines for making all wash ers to 4 in.

One No. x Washer Machine for washers up to 2 in. Bolt Size.

Two Bolt Headers with latest and best improvements for all bolts to x in. Strongest heads and largest variety of any mashine in sec.

One No. x Nut Machine for 134 in. Nuts, hemson or square. gon or square. Two No. 2 Nut Machines for No. 1 Nuis, and all

Two No. 3 Nut Machines for 1/2 in, Nuts, and all mailer; 1000 lbs. of 9/4 in. Nuts made per day. YORK & SMITH,

#### Cleveland, Ohio. For Sale.

Contents of large Linseed Oil Hill, consisting of at Hydraulic Presses, Pumps, Steam Pans, Tenins, Roll Milis, Elevators, &a., together or separately, very cheap.

H. G. BREGGS, 494 Water Strugt, New York.

#### For Sale.

A well-established Hardware business, Stock, Fixtures and Good Will, located in Northern New York, on the line of D. and H. S. Co. Railroad. Business of twenty years' standing, Address HARDWARE TRADE, Office of The Iron Age, 33 Reade St., New York.

For Sale.

Two Corliss Condensing Beam Engines,

30 in. x 70 in. cylinders. Address. THE HARTFORD ENGINEERING CO.

#### For Sale. SECOND-HAND **DROPS AND LIFTERS**

BEECHER & PECK,

#### Lock Box 120, New Haven, Cons. For Sale.

Foundry and Machine Shop.

Large assertment of Patterns. Rusiness estab lished in 1824. For terms and full particulars apply to O. VAN BRUNT.

121 Chambers street, New York.

One so-inch Engine, one too-horse Locomoneve Boiler; two large Pulleys, 30-inch face; a sg-inch Rubber Beit, &c. All in good order, and will be sold for less than value to make room for larger. Can be seen running at AKRON RUBBER WOLKS, Akron, Ohlo.

### For Sale.

From 750 to 1000 acres of coal land, with two
5-foot coal seams and all the minerals of Eastern
Ohio and Western Pennsylvania; has good frou
or steel manufacturing site, with railroad and Ohio
River frontage. Inquire for printed circular of
JNO. C. COUCH, Heal Hatate Agent,
139 Fifth avenue, Pittaburgh.

#### FOR SALE LOW.—ENGINE.

A Vertical High-Pressure Steam Engine, com plete. Cylinder, 24 in. by 48 fa. Built by A. J. Sweeney & Son. Can be seen in daily use at our nail factory. LA BELLE IRON WORKS.

#### Wheeling, West Va. For Sale.

Stock of Hardware in Columbus, Onto. Clean stock, good trade, good location. On account of failing health will be sold on advantage we terms and payments easy; will not be exchanged for real estate. Address

Z. Y. GLARK, Cotumbus, Ohio. Blast Furnace For Sale.

One of the very best properties in the state of Penncylvania, including farm of as acres, considerable portion of whice is the Land. Capacity, 275 tone Pig Iron por week. For full particulars apply to 1 O RISHARDSON.

J. O. BIGHARDSON, No. 232 Dock St., Phradelphia.

#### Special Notices.

#### TO MANUFACTURERS

For Bont, in the City of Newcastle, Del., 38 miles from Philadelphia and near Wilming the following destrable Workshops and lot of Ground:

No. x Building, 944 feet x 37 feet.
No. a Building, 95 feet x 25 feet.
No. a Building, 95 feet x 25 feet.
No. 5 Building, 30 feet x 25 feet.
No. 5 Building, 325 feet x 33 feet.
No. 5 Building, 325 feet x 33 feet.
Also des

Radiroad tracks through the yard and adjacent to Delaware

DELAWARE IRON CO. Newcastle, Del., Or LOOK BOX 10, Philadelphia Post Office

#### For Sale.

The Property of the Wampum Iron Company, Limited. Parance, rex so, just blown in after complete remains; Coal Bank, Limestone Quarry, Coke Oveces and Coal Washing Machinery; all in complete remains order. Will be sold resconably. Wampun EDON COMPANY, LIMITED, Wampun, Pa.

#### For Sale.

THAT VALUABLE

#### FURNACE PROPERTY AND PLANT

attuated in Pascarawas County, Ohio. on the P. C. &

stunsed in researawas county, Cuic. on the P. C. & M. L. Rainread, and the Ohio State Canal, Encorn as M. L. Rainread, and the Ohio State Canal, Encorn as THE GLASGOW IRON WORKS, consistent of two Blass Furnaces, refeet high, erected in 19/4; two Blowing Engines, eight Rollers, so feet long; fear Hos Hant Ovens; two Furnace Hoista, with two pairs "Crane Bros." Hoisting Engines, and all modern furnace appliances and plant. Also Locomotive, Care, about three miles of Railroad, a "Blandy's "Saw Mill with ongine and boiles, a Clay Mill with ongine and boiles of high one sinch Donkey Funnas, and about rose ecros of Ore, Timber and Farm Lands, containing seems deposits of the best of the celebrated Blackband Ore. There are four seams of Coal in the property, some suitable for furnace use; also Fire Cay of excasions quality, all already opened up by Arift mines. Offens for the above will be received by JOHN FREW, Port Washington, Tuscarawas County, Ohio.

#### For Sale.

The Industrial Works of Shamokin, owned and successfully cerried on for a number of years by the late Wm. Brown, deceased, consisting of Foundry and Machine Shop, and a large stock of Patterns regarded as part of the property. Boiler Shop, Blacksmith Shop and Factory for the manufacture of heavy coal stroems. Well located in the borough of Shamokin, Pa., with the best facilities for shipping by rail, and surrounded by a district contributing all the work that a shop of that kind can possibly than out. The works are now running, but as a very short time possession can be given. Basy terms of payment are offered to suit a purchasser of limited capital.

Offered for sale by WM. MgILVAIN & SONS, Reading, Pa.

A Complete Muck Bar, Merchant and Guide Rolling Isid. Capacity rocco tons, and at present in rul operation. This property is attuated on both the Penns; Ivania and Philadelphia & Reading Reliroads. Satisfactory security will be required at leasens. leasees. For further particulars address P. O. Box 81, Harrisburg, Pa.

For Rent.

For Sale. One large-in. Horizontal Engine. One pair Horizontal Cul-off Engines—Cylinders 16x42 and 16x36 in.; band ity-wheel, 12 ft diam., 20-in tace. Have been run together; will be sold in present shape or separately. Twe Locomotive Boilers, 30 and 30 H. P. each. One 4 ton "Otis" Freight Elevator. For particulars address.

BELOHER & BAGNALL, 40 Cortlandt 5t., N. Y.

#### For Sale.

Stock of hardware, stoves and implements, and store furniture, in one of the best towns in Kansas. · HARDWARE,

### FOR SALE OR TO RENT.

Box 366, Salina, Kansas.

Now, light Factory; 70,000 floor feet; 975 H. P. Corliss Engine, giving power at minimum

Shafting, piping, elevator, &c., all complete and ing and ample vard room. Immediate possesgion.

A large quantity of General and Special Machinery at lew prices.

SHARPE RIFLE COMPANY. Bridgeport, Conn.

#### For Sale.

Hardware Stock and Business. Located in one of the best towns of Northeastern ennsylvania. Stook clean and well assorted, uited to the requirements of the trade where scated. Business of 30 years' standing. For located. Business of 30 years apply to terms and full particulars apply to JAMES S. KUHN, Towards, Pa.

#### For Sale.

#### STEEL RAILS-IN STORE.

1000 Tone 40 lb. "Guests,"

1000 Tons 41% 1b. "Rhymney,"

with Steel Fish Plates to match the 40 lb. Rails. Iron and Steel Batis of any section, for delivery in the United States, or f. o. b. English ports.

WM. LAWRENCE STROUD,

and John street, New York.

me Chambers Mt., New York,

Manufacturing Property for Sale. The Real Butate of the late Foundry and Machine Company of Taunton, Mass. Buildiars conduct of Foundry, Machine, Erecting and Black-amith Shope, and covering about 6,000 square amith Shops, and covering nouselfeet of ground. For particulars apply to THE OCOROR PLACE MACHINERY AGENCY,

### Special Notices.

To Railroads, Mill Owners and Contractors.

#### STRUCTURAL IRON WORK FOR SALE.

Having purchased the Ironwork of the Main Centennial Huilding, situated in Fulmount Park, Philadelphia, we now offer the same in sections to suit purchasers. These buildings can be sold in widths varying from roo to 168 feet, and of any hight, from 40 feet down to 25 feet, and in length from roo to 700 feet. We have eight Spiral Stairways, in all over soc steps.

Plans showing how all parks of these buildings may be utilized in railroad depots, &c., have been prepared by Mesars. Wilson Bros. & Co., of Philadelphia, civil engineers and architects, and can be seen at the office of Mackintosh, Hemphili & Co., limited, Fort Pitt Foundry, Pittsburgh, Pa., or at the office of the company, at Centennial Building, West Philadelphia.

Wishing to dispose of the above quickly, we are repeared to offer great inducements to purchasers, both as to low price of material and promptness of delivery. Any communications addressed to the CENTENNIAL STRUCTURAL CO., care of Mackintosh, Hemphili & Go., Limited, will receive prompt attention.

#### To Let.

Office Room to jet on ground floor, rio Chambers Street.

#### WALTER C. HARLOW. German Silver Workers.

Wanted, a Foreman to take charge of shops making German silver forks and spoons. Must be temperate, reliable and thoroughly competent to take charge of whole work. Situation permanent and desirable. Address, with full particulars of experience and salary desired, GERMAN SILVER, Office of The Iron Age, \$3 Reade st., New York.

Copartnership Dissolution.

TOTICE is hereby given that by the death of the junior partner, Mr. Nathan Anthony, the firm of HRADWORD & A.NTHONY is this day dissolved.

The affairs of the firm will be settled by the under signed, the sole surviving partner.

Roston, June 12, 1811.

MARTIN I. BRADFORD. Boston, June 12, 18ds.
All communications in regard to the affairs of the late firm should be addressed to HRADFORD & ANTHONY, Boston, Mass.

MARTIN L. BRADFORD hereby gives notice that he will continue his business under the name of "HRADFORD & ANTHONY." The estate of the late Nathan Anthon s to be in no way interested in the future business, whether con ducted under the name of Bradford & Anthony or

ducted under the name of branches.

All business communications abould be addressed to BRADFORD & ANTHONY,

194 Washington St., Roston,

Importers, Manufacturers' Agents and Dealers in

Cutlery, Fishing Tackle, Skates.

See advertisement first issue each mouth.

for Forks, Shovels and Spades in large quantities and of good quality, for home trade or export. ALLEN & NIXON.

#### 42 Maiden Lane, New York. Cold Press Nut Punch.

Nearly new, graded to to 1, with adjustable side gear, so to r, three speed, large and small nuts; weight, 240,000 pounds.

> SHIMER & CO., 950 South 3d St., Philadelphia.

A Philadelphia Tin Plate & Metal House desires the services of a thoroughly competent traveling Salesman. None other need apply. Address POST OFFICE BOX 2698, stating age, references and territory best ac-

#### quainted with. FORGINGS.

A practical man, having some capital to invest, would like to hear from parties who are desirous of establishing the Forging Business in their neighborhood. State location, chances for business and inducements that can be offered to W. H. N. & CO., Office of The Iron Age, \$3 Reade St., New York.

#### A REWARD OF \$100

Is offered for the most useful and merchantable article to be made from Cotton Tie Band Scrap modern. Lowest insurance rates. Railroad sid- Iron. Right reserved to reject any or all samples. The one accepted will be remitted for in cash. Address J. S. BROWN. Galveston, Texas.

### Wholesale Hardware.

Parties wishing to invest in Wholesale Hardware rarties wishing to investin Wholesale Hardware business in a Western city, please address A. B. K. & Co., Office of The Iron Age, 83 Reade St., New York, Special inducements offered.

### Wanted.—Rolling Mill Machinery.

1 SET 10 IN., 3-HIGH ROLLS. 1 SET 12 IN., 3-HIGH ROLLS. Furnaces, Boilers, Engine, second-hand, good order.

SHELDON & CO., Auburn, N. Y.

#### Wanted.

TRAVELING SALESMEN (who have the liberty to carry other goods) to represent a line of Specialties for the Hardware, Upholstery and Picture-frame trade, on which a good commission can be made. The goods are manufactured by an old and responsible company. All communications will be strictly confidential.

Address Address SPECIALTIES, Office of The Iron Age, \$3 Reade St., New York.

#### Wanted.

Power Shear for cutting up bar iron sorap, large and small. Also small Power Punching Press and good Iron Planer. Give weights and prices. Box 1012, Post Office, N. Y. Address WANTED.—A young man wants a rituation as Clock in a first-class Hardware house. Ten years' ex, errence in the general bardware business. Best of references. Address P. O. BOX 95, Lykens, Pa.

#### Trade Report.

#### BRITISH IRON AND METAL MARKETS.

[Special Ouble Dispatch to The Iron Age.] LONDON, WHENMEDAY, Feb. 15, 188a. Scotch Pig.-The market is dull, and prices are weaker. A new scheme, limiting the production of Scotch and Cleveland Plg, is being considered. As compared with last week, quotations show a decline of 6d. in Gartsherrie, Langloan and Carnbroe, and 1/ in Coltness and Summerlee. Eglinton is 6d. higher. The following are prices to-day for

No. I: \*\* Coltness Summerlee Eginton 

large during the week, under an increased dealine was 1/2 0 4 %. Louisville and Nash-demand. Prices are weak and lower, to-ville general mortgage of dealined to 96 1/2 day's quotations showing a decline of 1/on from 97, and recovered to 96; Wabash gen-Nos. 1 and 2 Foundry, and 6d. on No. 5 and eral mortgage 6's declined to 80% from 85%, Forge. We quote as follows, f. e. b. ship- and recovered to \$4 ; Kansas and Texas genping ports :

Middlesbro' No. : Foundry ..... No. a 69/ No. 3 44/6 No. 4 Forge 40/6 West Coast Hematites.—The market is

| Command | Comm

porte Iron Rails .- The market is dull and

New York, £4. 5/ @ £4. 10/. Copper -The market is quiet, with prices the corresponding posteds inst year:

weaker. Best selected is quoted, nominally, Tin,-The demand has fallen off ar prices are weaker. Straits Ingots, spot, hav

declined to £111, and futures to £113. Tin Plates .- The demand is steady, wit moderate business doing. Prices are steady

We quote : Spelter.-The demand has declined an weaker. We quote ordinary, at shipping [0]. ports, £17. 5/.

Lead .- The market is dull and transactions are small. Quotations are nominal. We quote common English Pig, £14. 5/, nominally.

Freights .- Steam freights from Glasgow to New York are quoted, 18/@ 20/; from Liverpool to New York, 19/, and Liverpool to Philadelphia, 22/. Freights are casiér.

#### FINANCIAL.

Office of The 1808 AGE, WEDNESDAY EVENING, Feb. 15, 1882. In mercantile circles interest is chiefly concentrated on the liquidation in New York and Chicago of the bull speculation in grain and cotton, which promises at no distant day to bring the home and foreign markets in such relation that exports can be profitably resumed, thereby converting our longhoarded merchandise into commercial bills, and driving rates in the exchange market to a point where the exportation of precious metals will be no longer practicable. Even now the salutary influence of the process referred to is perceptibly felt. This afternoon it was positively stated that no gold in any amount would go out in Thursday's steamer, contrary to reports industriously circulated for some days past, as no profit is possible at surrent rates of foreign exchange, \$4.901/2; and it was equally well known that the \$1,000,000 shipped on Tuesday per steamship Arizona was experted for a specific object, in no sense partaking of a speculative venture, and therefore was without significance.

The Produce Exchange was the scene of unusual excitement to-day, growing out of steadily declining values and reports of failures here and elsewhere, but the rumor that the Chicago Produce Exchange had closed on account of the prevailing confusion was not confirmed. It is observed with satisfaction, however, that outside of the gam-bling circles with which Wall street and the exchanges are so largely identified, legitiHor silver.

| Hukill | Hor silver | 16.45 | 17.00 |
| Horace F. Sise, No. 100 Chambers street, |
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situation is looked upon as more favorable

than for several days past,

Money on call has rubs about 5 @ 6 % on United States bends, a @ 9 %; time loans mechanged. Moreuntile paper, stary days and four mostles, is quoted 5 @ 6 %.

During the weak under raylew the stock parket has been without authorition. The announcement of fafferes among cotton and grain speculators; a doubtes in Tempessee bonds, in consequence of a doubtes of the Superior Court of that State against the valthe breakdewn on Friday in Louisville and Kashville, by reason of heavy sales on account of an unfarturate cotton speculator -these were smong the fuffuences which contributed to maetile the market. Active money also had its affect. The weakest on the share list latterly are the Could stocks, viz. : Wabash, Texas and Pasifie, Missouri viz.: Wabash, Texas and Faeme, Mesouri .58/6 Paesite and Jureey Control. Studbern stocks, notably the Louisville and Nashville, Chattenooga, Memphia and Charleston, were also nothing in strength. The fall in Chicago, Lighterage from Ardrossan to Glasgew is o/ @ Columbus and Indiana Control was due to the announcement of a recognization scheme. Cleveland Pig.-Transactions have been In the railroad bond markes to-day, the net eral morigage 6's desired to 72% from \$0%; Texas and Pasifis Land Grant Incomes to 69% from 65%; Wabash seconds to 1061/2 from 108; Delphos and Burlington Incomes to 20 from 201/2. C. C. & I C. West Coast Hematites.—The market is dull and prices nominal. Mixtures of 1, 2 and 3, equal portions, f. o. b. shipping ports, are quoted 60/.

Blooms.—There is but little demand, and transactions have been small. We quote:

Lake Shore, Deaver and Rie Grande, Louis-Manufactured Iron.—The market is quiet, with a good business doing under a steady demand. Quotations are largely nominal:

8 s. d. 8 s. d. Western, Missouri Paolite, Milwaukee and St. Pani, Union Paolite, Northwest, Northern Paolite preferred, and Kaneas and ville and Nachville, Jersey Central, New Texas.

The exports of domestie produce from this port continue comparatively light, their total for the past week being only \$6,8ec,543, against \$7,599, ros for the same week of last year. At present there is no important out-Steel Rails.—The demand is abating, and of corn and flour are below the average. prices are weak. Ordinary sections are Provisions and petrolours are also exported quoted £6. 5/ @ £6. 10/, f. o. b. shipping in smaller quantities than usual, while the cotton movement is moderate. The imperiations of specie and bullion at

prices nominal. There is very little inquiry. this port during the week ending February pare as follows with the movement during

Geld			1100 J 0, 1496 1,308	84	1081. 617.895 107.313
Total		\$-4/B		Magnet Anagnet	,gn5 408
Gold Stiver		1881 24,880	-01.	300 670	6-81. ,896,563 ,759,164
Total	\$1	6,000	1,199	975	688,787
Government	bonde	at	the	alose	were
quoted as follow	**		- 1	Bud.	Asked
6. 8. 416's 1891 reg	istered.		E		11956
U. S. 416 s 1891 COU	mon	****		3	11496

The bank statement was unfavorable. It shows a loss in surplus reserve of \$2,330,650, which reduces the amount held by the bank's above lawful requirements to \$4,051,175.

last week: Feb. 4. Feb. 11. Comparison.
\$388,832,000 \$389,988,500 Dec. \$638,500
66,619,900 \$6,423,500 Dec. 3,336,400
18,463,300 Bec. 3,58,900
316,985,900 316,985,900 Bec. 3,746,000
316,985,900 318,746,000 Dec. 3,746,000 Loans..... \$398,852 Legal t'd'rs
Tot.reserve
Deposits...
Reserve required... 79,081,475 77,009,885 Dec. 1,418,650 0,381,525 4,031,178 Dec. 2,130,650 0,669,699 9,940,100 Dec. 149,100 MENERG SPOCKE The closing quotations for mining stocks

were as follows: Bid. Asked. 

=		-
	Tamona	
×	Lacrosse	
	ANCHORE VALUE	0040
	Little Pitts	E.70
	L. Chief 3.00	R.OF
	Maripesa	
١	MISSI, Frolesses seems and	
١	Moese 98	T.00
9	Miner Boy	- 8
1	Mexican	
	North Stan	
J	Orl. and Mil.	***
١	Plumas	94
J	Quicks'r	
J	Quick, Pf98.00	
9	Rappah'k 31	36
d	Robinson	5.00
Я	R. Sun	60
3	Red Meph	
4	8. Nevada 7.28	8.ag
4	Silver Cliff 8.39	8.49
1	Sutro.	78
1	Spr'g Val 3.95	4.70
J	Stormont	1.00
1	S. Bulwer	265
1	S. Hiten	28
1	South Pacific	8.76
1	St. L. r and 4	
1	St. L a and 3 71	79
1	Tip Top	4.00
1	Union Con	EX.OR
1	Unadilla	80
ı	Vizina 8.75	n.8a
1		-
1	the state of the s	
1		

#### GENERAL HARDWARK

Business is generally reported active, and the tone of the market continues strong. Very few changes in prices have been made during the week.

Our attention has been called to a remark able and very gratifying example of business honor, particulars of which are kindly furnished us by the Russell & Erwin Mfg. Co. Messrs. John McAnerney & Co., dealers in Railroad Supplies, corner Church and Rector streets, New York, failed in December, 1878, through the insolvency of an Iron company in which they were interested. They effected a settlement with their creditors on the basis of 20 cents on the dollar, and continued in trade. Since then they have done a pros perous business, and on the 10th of February, inst., they paid the remaining 80 cents, with interest to date, discharging in full all claims against them. Though not unprecedented. such fidelity to the principles of business honor is rare. Houses which make such a record for themselves have vastly more reason to be proud of it than of uninterrupted business and Foreign Hardware is in fair request, and

values are very steady. John Wilson, Sheffield, England, manufacturer of John Wilson's Shoe Knives, Butchers' Knives, Steels, &c., has issued his 1882 revised price list, from which we extract the following announce ment: "John Wilson deems it desirable to intimate that he has made an important alteration in the Shoe Knife Department of his business. Hitherto he has sent out three classes of Shoe Knives, namely, 'Common,' Refined' and 'Warranted,' the 'Refined' being charged 3d. per dozen more than 'Common,' and 'Warranted' 3d. per dozen We quote Welsh, 30 ib and upward, £5. 10/, to were \$78,270, consisting of \$22,811 in more than 'Rafined.' In future, he will send out only two classes, £. e., 'Common' of \$91,021 for the week smalls are small, with prices steady. We quote Heavy Wrought, e. i. f.

You were \$78,270, consisting of \$22,811 in more than 'Rafined.' In future, he will send out only two classes, £. e., 'Common' and 'Warranted.' The 'Common' will last year. The importantions sheet the 1st of steady. We quote Heavy Wrought, e. i. f. to the same prices as were being charged for 'Refined;' and, for convenience, the numbars by which 'Refined' were known and ordered, are now appropriated to 'War-ranted.' By the foregoing arrangement two important concessions are made in favor of his customers—a reduction of 3d. per dosen in the price of 'Warranted'—and the further advantage, to consumers especially, of their being able to procure knives ground Warranted' way, or lengthwise, at the prices 'Refined' have hitherte been charged. This latter advantage will be more apparent to buyers generally, when it is explained that 'Refined' blades are ground across, and the grinder is apt to leave them round and thick in the middle; but, by the lengthwise process of grinding and finishing, the blades are ground thinner and flatter, the consequence being that they are much more easily whetted to a keen and lasting edge." The list is handsomely illustrated.

The demand for Nails has improved during the week and a fair amount of business bove lawful requirements to \$4,051,175.

The following is an sassysts of the bank Manufacturers' Association held a meeting in totals of this week compared with that of this city during the week, at which existing prices were confirmed. We quote rod, te 6od., \$3.40 @ \$3.50, per keg, net, according to quantity.

Ausable Horse Nail Company, No. 4 War-

ren street, have issued, under date of the Ist instant, the following revised price list for Ausable and Clinton Horse Nails, which is subject to discount 20 and 10 per cent:

ACSARLE HORSE WALLS.

They inform us that their business year ending on the 1st instant was the largest they have ever had, and that they are now very much behind their orders.

Alford, Ward, Davenport & Co., have emoved their business from No. 85 to No. 77 Chambers street, near Broadway. We have received the following:

93 John St., New York, Feb. 1, 1886. DEAR SIR: The firm of Wolff, Kahn & Co. has been dissolved by mutual consent, and the retirement of Mr. Kahn. The undersigned, having succeeded to its business, have formed a new partnership for continuing the same under the name of "R. H. Wolff & Co.," and respectfully solicit a continuance of your patronage. Yours truly.

RAPHAEL H. WOLFF.

CHARLES WEILL, MAURICE WISE, Special.

119, "Ives" and "Eagle"......
120, Top Prop Nuts...
"Leather Covered" and "Ex

"Leather Covered" and "Excelsion".

122. "Silver and Japanned
123. Top Prop Block, Rubber." Prop Block.
123. Washers, "Rubber," Prop Block.
124. "Top Prop Block."
124. "Prop Block."
124. "Leather" Axle, 2½ in and under.
125. Iron, "Standard List," Dis. 6c 20 D
125. "Thin"
126. Whiflletree Hooks, "Griggs," Japanned
117. "Premium Spring."
118. "Premium Spring."
119. "Premium Spring."
119. "Premium Spring."

114, "Premium Spring", 35
127, Whip Sockets, Nos. 7, 0, 10 and 11 40%;
147-131, "Nos. 18 to 55½ 20
132, "Nos. 65 to 50 15
132, 132, "Nos. 60 to 68 25
134-136, "Nos. 10 to 178 15

N. B.-Customers will confer a favor by

using descriptive terms, as per our discount sheet or catalogue, when ordering goods. Please observe that we quote everything net

cash (all cash discounts off). In remitting,

cash (all cash discounts oil). In remitting, remit for full amount of invoice, as no discount from invoices, as rendered, will be allowed. Agents not authorized to change our terms. Accounts subject to sight draft,

IRON.

A largely attended meeting of the Iron

trade, to confer on the desirability of estab-

lishing an Iron Exchange in this city, was

held to-day. Full particulars of the meeting will be found in another column.

American Pig.-The Iron market during

the week under review has been dull in

nearly all its branches. The inquiry for Pig

Iron has fallen off considerably, but the con-

sumption shows no sign of abatement, and

the deliveries on contracts continue on a

very heavy scale. No new business worthy

· mention has come to our notice during the

week, and quotations are unchanged as fol-

lows: Foundry No. 1 X, \$26.50 @ \$27;

Foundry No. 2 X, \$25; Gray Forge, \$24. Scotch Pig.—The tone of the market is

not as buoyant as of late, and although prices

are not quotably lower, a good buyer would, on some brands at least, find little difficulty in shading the asking price. The business

of the week was chiefly of a retail nature, and the only transaction worthy of mention

that has come to our notice is a sale of 100

tons Glengarnock at \$25 ex ship. We quote Eglinton, \$24.50 @ \$25; Carnbroe and Glengarnock, \$25.50 @ \$26; Gartsherrie, \$26 @ \$27, and Coltness, \$27.75 @ \$28.50.

Rails.-There seems to be more disposit

tion on the part of Bessemer Rail mills to ecure new business than has been the case

of late, although we do not hear of any pres sure to sell. It is well known that the entire

plant of the country is fully employed at

present, and the output for several months ahead is said to be under contract. Steel

Rails for delivery in the fall are quoted \$57 @ \$60 at the mills. Iron Rails are neg-

lected, and we quote ordinary sections nom

Old Rails.-The demand for old material

is light, and the tone of the market lacks

vigor. Sales are reported of 250 tons Double Heads at \$32, and 500 tons T's and Bridges at

\$29.75 and \$33 respectively. We quote T's

Scrap.-We quote No. 1 Wrought, to ar-

rive, \$31.50 @ \$32, and yard Scrap, prime

selected, \$33 @ \$33.50. Business very quiet.

inally \$48 @ \$50.

\$30 @ \$31 and D. H., \$32.

exchange added, after thirty days.

"Thomas"..." "Snell's"..."ives" and "Eagle"

Iron, "Standard List," Dis. 6c @ B.

without Nuts & Rivets.....335

Derby, No. 1					
		\$5.50	\$7.00	\$7.50	\$12.50
Derby, No. 2		6.25	6.75	7.25	12.00
Cincinnati No. 3.		4.75	5-75	5-75	0.00
Ohio, No. 4		4.75	5 25	5.75	9.00
Ohio, No. 415		6.75	7.25	7.75	12.00
Larkins, No. 5		11.50		12.50	17.00
Farling No 5		10.50		11 50	10.00
Larkins, No 6 Larkins, No 7		0.70		10.30	15 00
Derby, No 8		8.25	8.75	0.45	11.50
		6.75	7.25	7-75	11.00
Cincinnati, No. 2			7.00	7.55	12.50
Derby, No. 9		6-50			
Derby, No o's		6.25	0.75	7.25	12.23
Gincinnati, No. 19		5.00	5 50	0,00	9.25
		3-3	11-10,	.3 4	
Cincinnati, No. 14		4.25	5.00	5.25	
Oincinuati, No. 13. Brewster, No. 11		4.50	5.25	5.50	9.50
Brewster, No. 11		11.50	11.51	1101	
Brewster, No. 11/2. Brewster, No. 12		11.50	11.50	13.00	
Brewster, No. 12		13.00	13,00	19,122	
Pull Circles, No. 1	3. 14.				
15. Or is inches D	10 11				
Half Round Iron.	Plain				
Tops				11.00	18.00
Patto Darby Tons					20.00
Ditto Darby Tops					
Ditto Darby Tons	3. 14.				
Pall Circles, No. 1 15 or 16 in. Diam.	1. 14. Flat,			13,00	20.00
Pall Circles, No. 15 or 16 in. Diam.	1. 14. Flat.			13.00	20.00
Pall Circles, No. 15 or 16 in. Diam.	1. 14. Flat.			13.00	20.00
Pall Circles, No. 15 or 16 in. Diam.	1. 14. Flat,			13,00	25,00
Putto Derby Tops. Full Circles, No. 15 or 16 in. Diam. Plain Tops.	1. 14. Flat,			13,00	20.00
Putto Derby Tops. Full Circles, No. 15 or 16 in. Diam. Plain Tops.	t. 14. Flat.	136	154	13.00	11/2
Ditto Darby Tops. Pall Circles, No. 15 or 16 in. Diam. Plain Tops Ditto Derby Tops	1. 14. Flat.	136 \$22.00	114	13.00	11/2
Ditto Derby Tops Pall Circles, No. : 15 or :16 in. Diam. Plain Tops Ditto Derby Tops Derby, No. 1	\$19.30	134 \$22 do	114	13.00	11/2
Ditto Darby Foos. Fall Circles, No. 1 15 or 16 in. Diam. Plain Tops. Ditto Derby Tops.  Derby, No. 1 Derby, No. 2	\$19.30 18.90	134 \$22 do	114	13.00	11/2
Detto Derby Foos. Pail Circles, No. 1 15 or 16 in, Diam. Plain Tops. Ditto Derby Tops.  Derby, No. 1. Derby, No. 2. Cincinnati, No. 3.	\$19.00 18.00	134 \$22 do	114	13.00	11/2
Ditto Darby Tous. Pall Circles, No. 1 15 or 16 in. Diam. Plain Tops. Ditto Derby Tops.  Derby, No. 1 Derby, No. 2 Cincinnati, No. 3 Full Circles, No. 14.	\$19.00 18.00	134 \$22 do	114	13.00	11/2
Detro Derby Toos.  **Pail Circles, No. 1  **15 or 16 in. Diam.  Plain Tops.  Ditto Derby Tops.  Derby, No. 1  Derby, No. 2  Cincinnati, No. 3  Full Circles, No. 14, 15 or 16 inches	\$19.00 18.00 15.00	134 \$22 do	114	13.00	11/2
Detto Darby Toos. Pall Circle 1, No. 1 15 or 16 in. Diam. Plain Tops. Ditto Derby Tops. Derby, No. 1 Derby, No. 1 Derby, No. 2 Cincinnati, No. 3 Full Circles, No. 1, 14, 15 or 16 inches Diam. Hf. Rd Ir.	\$19.00 18.00 15.00	\$22.00 \$22.00 \$1,00 19.00	154 \$20,00	158	11/2
Detto Darby Toos. Pail Circle 4, No. 14 or 16 in. Diam. Plain Tops. Ditto Derby Tops.  Derby, No. 1. Derby, No. 2. Cincinnati, No. 3. Full Circles, No. 14. 14. 15 or 16 inches Diam., Hf. Rd Ir. Plain Toos.	\$19.00 18.00 18.00	\$22.00 \$22.00 \$1.00 19.00	1% \$20,00	156	1½
Detto Darby Toos.  Paul Circle 1, No. 15 or 16 in. Diam. Plain Tops. Ditto Derby Tops.  Derby, No. 1 Derby, No. 2 Cincinnati, No. 3. Full Circles, No. 14. 14. 15 or 16 inches Diam. Plain Tops. Dutto Derby Tops.	\$19.30 18.90 18.90 15.00	\$22.00 \$22.00 \$1,00 19.00	1% \$20,00	156	11/2
Detby Toos.  Pall Circles, No. 1  re or if in. Diam. Plain Tops.  Detby, No. 1  Derby, No. 2  Cincinnati, No. 3  Full Circles, No. 14, 15 or 16 inches Diam. Hf. Rd Ir. Plain Tops. Datto Derby Tops.	\$19.00 18.00 18.00 20.00 21.00	\$22.00 \$22.00 \$1.00 19.00	1% \$20,00	156	1½
Detto Darby Toos. Paill Circles, No. 1 15 or 16 in. Diam. Plain Tops. Ditto Derby Tops. Ditto Derby No. 1 Derby, No. 1 Derby, No. 2 Cincinnati, No. 3 Full Circles, No. 14, 14, 15 or 16 inches Diam., Hf. Rd Ir. Plain Tops. Dutto Derby Tops. Full Circles, No. 13, 14, 15 or 16 inches	1, 14, Fiat, Fiat, Signature 14, 500 18,000 15,000 21,000	\$22.00 \$22.00 \$1.00 19.00	1% \$20,00	156	1½
Detby Toos.  Pall Circles, No. 1  15 or 16 in. Diam.  Plain Tops  Ditto Derby Tops.  Derby, No. 1  Derby, No. 2  Cincionati, No. 3  Full Circles, No. 11,  14, 15 or 16 inches  Diam. Hf. Rd Ir,  Plain Tops  Butto Derby Tops.  Full Circles, No. 13,  14, 15 or 16 inches  Diam. Flag Tops.  Full Circles, No. 13,  14, 15 or 16 inches  Diam. Flag Flam.	\$19.00 18.00 18.00 15.00	134 \$22.00 at.00 19.00	114 \$20,00	13,00	11/4
Detto Derby Toos. Paul Circle 1, No. 1 15 or 16 in. Diam. Plain Tops. Ditto Derby Tops. Ditto Derby No. 1 Derby, No. 1 Derby, No. 2 Cincinnati, No. 3 Full Circles, No. 14, 14, 15 or 16 inches Diam. Hf. Rd Ir. Plain Tops. Dutto Derby Tops. Full Circles, No. 13, 14, 15 or 16 inches	\$19.00 18.00 18.00 20.00 21.00	\$22.00 \$22.00 \$1.00 19.00	134 \$20,00 28.00 31.00	13,00	28.00

Full Circles from Flat Iron, I to 15% inches wide, 14 to 40 inches diameter, without Clips, 5½ cents per pound. No charge for Extra Squares on 12 and 14-inch Cincinnati, made from 5§ or 3§ Iron, nor on Brewster Fifth Wheels. On all other kinds 50 cents Fifth Wheels. On all other kinds 50 cents per dozen extra for extra square on §§ and §§, 75 cents per dozen extra on 7§, and §t per dozen extra on 1 inch Fifth Wheels. Wheels, with rod to Axle bed, §2 per dozen extra. Brewster Wheels, with Derby Top, §2 per dozen extra. Wilcox's Improved Interchangeable Bolts, for Brewster Fifth Wheels, 35 cents per dozen. Terms, net cash in 30 days. Goods delivered f. o. b. in Birminghatn. No charge for packages or cartage.

DISCOUNTS PROM WILCON & HOWE'S CATALOGUE OF

No. 2. F. Struary Sth. (28). All previous quadrians with frame. Texas: Nel cosh, thriy days. Processing extract to change without sorter.

23	
are represented, and the list prices of their	Catalogue Discount Page. Per cent.
goods are given. The Locks, Keys, &c., o Barnes Mfg. Co., are handsomely illus	8, Auti-Ruttlers, "Stuart & Wallace's 50
trated. The book contains III pages, and	1 8. Anti Rattler Tongs
the printing, paper and binding are first	10. Auti-Rattlers, "Fifth Wheel" 31/3 10. Apron Hooks and Rings. 25
class.  In our issue of January 5, we printed a	10. Auti-Kattlers, Firlm Wheel 11. Apron Hooks and Rings 12. Thomas & Parker's " . 20 11. " "Littlejohn's " . 20&5 11. " "Snell's " . 40&5 12. Bands, Malleable "Rim," 1½ and 1½ in.
supplement to Penn Hardware Company's	s 12. Bands, Malleable "Rim," 11/2 and 11/2 in.
catalogue of 1880. This supplement is now reissued under date of January 2, 1882, the	12. Bands, Malleable "Rist," z in. and larger,
goods being fully and comprehensively illus	13. Bands, Malleable "Rockaway," 20 per cent
trated. In the catalogue of H. F. Sise, re-	13. Bands, "Silver," "Oroide" and "Brass". 45&5
ferred to above, Penn Hardware Company's price list is omitted. Separate illustrated	ditto "Silver," "Oroide" and "Brass,"
catalogues of this line of goods will be fur-	lve Randa " Hub" and "Sand
nished to the trade on application.  Medford Fancy Goods Co., No. 96 Duane	15. Band Setters
street, have issued a handsomely illustrated	17, Bolts, "Spring Ber"50
catalogue and price list, in which they show	Way
a large assortment of Celluloid and other Dog Collars, Dog Harness and Blankets and	19, "Fancy Head, warranted "Norway"40
kindred goods. This company claim to manu-	Whiffletree "Spur" Pattern ss&s
facture the largest variety of these goods ever presented to the trade. Their Celluloid	Square "Bent" Round or
Collars are particularly handsome, and are	
durable and strong as well.	23. "Plain" 50 & 10 23. Brads 20 23. Buffers, Rubber Spring 50
Francis T. Witte, No. 111 Chambers street, has issued a revised edition of his net	23. Buttons, Tufting
price list of Cutlery, Guns, Revolvers, Silver	
Plated Ware, Hardware and Housefurnish-	26, 35 and 7-16 35.85 26, Spring Bar 55.85
ing Goods, &c. The book contains about sixty pages, and is comprehensively illus-	27, Clips, Norway, Superior, No. 7, 45 per cent.
trated.	27, Clips, Refined, Superior
The Little Giant Mfg. Co., Millport, N. Y. are making a new form of tire upsetter	27, Clips, Refined, Superior   50%, 5   50%, 5   27, Clips, Refined, Superior   65%, 10   28, Brewster Saddle, "E. & M.'s"   40   29, Clips, Brewster Saddle, "Two-Piece," \$1.20   29,
for which a great many advantages are	per doz. sets5
claimed. It is called the "Little Giant." The	10. Clips, Buggy Saddle, \$1.50 per dez. sets. 10 30. Clips, Buggy Saddle, without Top Plates, \$1, to dez. sets. 10 31, Clip Yokes "Eagle" 20\$10 31, Clip Yokes "Eagle" 10 31, Clip Yokes "Eagle" 10 31, Clip Yokes "Eagle" 10 31, No. 2 and 4,
machine is intended for shrinking, or upset- ting, wagon tires of all kinds, from the light-	31, Clip Yokes "Eagle"
est to the heaviest, even to I inch thick by	31, " in hole
3 inches wide. It is simple in construction, is made wholly of iron and steel, with jaws	32. Corner Irons, Body Top, 1/4, 5-16 and 1/4 in , 900, per doz, sets
of chilled iron. It is operated by a single	32, Corner Irons, Body Top, 7-16, \$1; ½ in., \$1.10, per doz. setsnet
lever, and is able, according to the state-	32, Corner Irons, Body Top, 7-10, \$1 : 22 ill., \$1.10, per doz. sets
ments of the manufacturers, to shrink the heaviest tire an inch at a single heat.	34-36, Couplings, "Shaft," "Wilcox's"565
It can also be used for shortening	Eyes
bar iron when such a thing is needed. Its capacity extends to 11/4 inches thick-	37, Coupling Bolts
ness. The machine is mounted upon a	40, "Brewster"
bench or frame, and weighs, when boxed	41, Coupling Jacks
ready for shipment, 100 pounds. In price the machine is very low. The same firm,	45. Curtain Frames
however, make a very heavy and powerful	and 16 20 46, Curtain Frames, "Excelsior," rest of list. 40 47. "Leather Covered". 20 47. Snaps and Eyes. 20 49. Loops and Buckles. 35
machine weighing some two hundred pounds, which is placed directly upon the floor. This	47. "Leather Covered"20 47. "Snaps and Eyes20
machine has no springs, the jaws moving in	50, Unriam Knobs, Single and Double, Screw and
both directions by the action of the lever.	50, Curtain Knobs, Single and Double, Screw and Riveting 60&5 50, Curtain Knobs, Concave and Button Rivet,
This is called the "Little Giant No. 2." An illustration of one of their machines will be	Riveting
found in their advertisement on page 31, to	51, "Knob Patch Fasteners
which the attention of the trade is invited. Wilcox & Howe, Birmingham, Conn.,	Eyes, No. 1, \$3; No. 2, \$3 50
have issued under date of the 1st inst., a	Screw Eyes, No. 1, \$3.20; No. 2, \$3.7533\\[ 51, Curtain Knob Patch Punches40
revised price list for Fifth Wheels manufac-	52. Dash Frames, ½ doz. or over
tured by them, and under date of the 8th first, a revised discount sheet to apply to	53, Dash Molding
their 1881 catalogue of Carriage Hardware,	53, Collars and Rous
both of which we print below:	54. Felioe Flates, Eagle 20016 54 Wrought Iron 333
BIRMINGHAM, CONN., Fcb. 1, 1832.  DEAR SIR: Below we give you our latest	or, Foot Rails, "Forged"
net cash prices for Fifth Wheels. In order-	52, 63, Gears. "Brewster," Nos. 3 and 4, 30 per
ing, it is important to state diameter, size of iron and width of axle. In ordering Brewster	64. Handles, Club
Fifth Wheels, state whether straight or bent	65, " "Coach,"
lugs are preferred for double drop reach.  N. B.—Prices below are exceptionally low	Round, 28c.; 34 Oval and 32 Round, 30c.; 34 Oval, 28c
for quality of goods and are subject to change	Oval, 38c
without notice. Yours respectfully, WILCOX & HOWE.	67, Joints, Stump, No. 1
9-10	os, King Bolts, "Plain," Nos. 1 and 2, \$1.50; No. 3, \$2; No. 4, \$1.25 per doz
Per dozen.   9-16   x1-16   3-4   7-3	68, King Bolts, "Patent," Nos. x and 2, \$2.40; No. 3, \$1; No. 4, \$4 per doz.
Derby, No. 1.     \$6.50     \$7.00     \$7.50     \$12.50       Derby, No. 2.     6.25     6.75     7.25     12.00       Cincinnati No. 3.     4.75     5.75     5.75     9.00	69, King Bolts, "Fmished," add 4cc per doz 5 without Collar same price as with
Cincinnati No. 3. 4.75 5-75 5-75 0.00 Ohio, No. 4 4.75 5 25 5.75 9.00	69, King Bolt Yokes, "Plain,"
Chichinal No. 3 4-75 5-75 5-75 0-00 Ohio, No. 4 4-75 5-75 5-75 0-00 Ohio, No. 4 4-75 5-75 5-75 0-00 Ohio, No. 4 4-75 0-75 1-20 Charkins, No. 5 11, 50 12, 50 Larkins, No. 5 12, 50 12, 50 Larkins, No. 7 0-0 10, 50 13 0-1 12, 50 12, 50 Ohio, No. 9 8 8-25 8-75 0-25 12, 50 Ohio, No. 9 6-50 7, 50 7, 55 12, 50 Ohio, No. 9 6-50 7, 50 7, 55 12, 50 Ohio, No. 9 6-20 6-75 7, 52 12, 53 Ohio, No. 9 6-20 6-75 7,	66, Joint Ends, Stort, soc. per set. 5 66, Joints, Stump, No. 3. 50%5 67, Joints, Stump, No. 1 30%5 67, Joints, Stump, No. 1 30%5 68, King Bolts, "Prain," Nos. 1 and 2, \$1.50; No. 3, \$2; No. 4, \$1.25 per doz. 5 68, King Bolts, "Prain," Nos. x and 2, \$2.40; No. 3, \$1; No. 4, \$4 per doz. 5 69, King Bolts, "Finished," add acc per doz. 5 69, King Bolt Nokes, "Plain," 40%5 70, King Bolt Yokes, "Plain," 40%5 71, King Bolt Yokes and Braces. 35 71, King Bolt Yokes and Braces. 35 71-73, Lamps. 25
Larkins, No 5 10.50 11 50 16.00 Larkins, No 7 9 0 10.50 13 00	74, Locks, "French 5 74, 75, " "Spring Box" and "Coach" 5
Derby, No. 8	70, Molding, Rattan, "Oval," List No. 5, \$3.5065
Derby, No. 9 6.50 7.00 7.50 12.50 Derby, No. 9 6.25 6.25 7.25 12.23	71, King Boit 2 okes and Braces 35 71-73, Lamps 25 74, Locks, "French 5 74, 7," "Spring Box" and "Coach" 5 70, Molding, Rattan, "Oval," List No. 5, \$3.50.65 70, "Angle," List No. 6, \$4 50.60 71, Nails, Lining, "Extra" 50 71, "Choth Covered" 50 71, "Name Plate" 50 72, "Band" 50
Gincinnati, No. 15 5.00 5 50 0.00 9.25 5-3 11-10 3-4	77. "Common
	77. "Band" Finishing " Frank" and
Brewster, No. 11 11.50 11.50 11.00	"Clout"25
Brewster, No. 13 13.50 13.00 15.00	78, Name Plates

'Shiftuns
Plates, "Derby'
Socke's. "Mosier's", in papers,
s, in bulk, 30 per cent.; in papers
Jont, "Silver' and "Gold",
"Norway Iron"
" "Leather Covered",
" "Excelsior",
" "Excelsior",
" No. 6, 750;

Palmer Budd and W. R. Ellis have formed a partnership, under the style of Budd & Ellis, for the purpose of transacting busines in New York and Boston, as agents and mission merchants in Pig Iron, Steel and Iron Rails, Railroad Equipment and Supplies, and metals generally. They will con tinue the agencies and connections in these lines of Jere. Abbott & Co., who have transferred to them this portion of their business Their office in this city is at No. 23 Cliff street, and in Boston at No. 10 Oliver street. They have been appointed sole agents in the United States for Robert Addie & Sons, Glasgow, Scotland, makers of Langloan Pig

#### METALS.

Copper.—Nothing has transpired in the way of sales during the week that we hear of; we therefore quote Lake Superior, nominally, 1914¢, and Baltimore 1914¢. No futures are offered; manufacturers at the same time are offered; manufacturers at the same time do not feel disposed to buy ahead. London cabled: Best Selected £74 yesterday, a decline of £4 from the highest previous point, and Chili Bars £64, 10/, a decline of £6. 10/

Stat Irons, "Bidwell's" 50%
"New Haven" 50%
"New York" 50%; \$7. "Philadelphia," "Norway" 55%; \$7. "Philadelphia," "Norway" 55%; \$7. "Philadelphia," "Norway" 55%; \$7. Seat Serolls and Back Stays 8. "Seat Serolls and Back Stays 8. "Seat Fasteners. Seat Serolls and Back Stays 8. "Seat Fasteners. Stays, "Larkin's," No. 1, 35c; No. 2, 45c per pair 102, Steps, Norway Iron. 25 

Straits Tin, but subsequently recovering to £111, while Singapore cables \$35 ?? picul. We hear, per cable to-day, that the demand in London has fallen off, and that prices are weaker. Staits Tin, spot, is quoted: £111, and Futures up to £113. "London, January 28.—An extensive business has again to be reported in this metal at variable prices. The tendency of the market has for the most part been in favor of buyers, a some-what serious fall having been made on Wed nesday. The opening figure for the week was £113. 12/6 @ £114. 2/6 for cash parcels nesday. The opening figure for the Week was £113. 12/6 £114. 2/6 for cash parcels of foreign, the market weakening on Tuesday to £113 @ £113. 10/. On Wednesday the price officially quoted was £111. 10/@ £112. strengthening yesterday to £111. 15/@ £112. 5/, and closes to-day at £111. 10/. These figures show the course of the market, and as in its actual state there appears but little fresh to report, for the deliveries apparently keep fairly good, prices have probably not been influenced by any fresh feature in connection with the actual position of the trade." We quote at the close large lines Straits and Australian, 25\(\phi\) @ 25\(\psi\)\(\phi\), and Banca, nominally, 28\(\phi\) @ 28\(\psi\)\(\phi\). Tin Plates.—The market continues quiet, but with more inquiry; we quote large lots, ordinary brands, \(\phi\) box: Charcoal Bright, \(\phi\). 25\(\phi\) brands, \$\frac{1}{2}\$ fox: Charcoal Bright, \$5.25 (@) \$6.50; ditto Ternes, \$5.37½ (@) \$5.62½; Coke Tin, \$5.37½ (@) \$5.62½; and ditto Ternes, \$5.25. Liverpool quotes \$\phi\$ cable: Coke Tin, 16/9, and Charcoal 20/ (@) 21/. We are cabled direct to-day that there is a steady demand, with a fair business doing and prices steady. Charcoal No. 1, 23/@ 25/, No. 2, 21/@ 22/; Coke No. 1, 17/6 and No. 2, 15/6. "London, Jan. 28.—A fair inquiry still exists, and prices are somewhat strengthened by favorable advices of the state of the trade in America."

Lead.—Since our last report, 400 tons Common Domestic sold at \$5.12½ @ \$5.15, closing firm at \$5.20 @ \$5.25, whereas of Refined some hundred tons sold at 5½ %. One of the Missouri producers sold out all he can turn out in March next at 5¢ there. The quotation of Common at St. Louis is \$4.90 quotation of Common at St. Louis is \$4.90 and of Refined 5¢, to which 32¢ freight this way would have to be added. Corroders out West took, so far, this year no less than 2000 tons. London quotes cost, freight and insurance, £15 @ £15. 2/6; the general outlook for Lead in Europe is decidedly encouraging, and a good many people over there expect higher prices. Our own to-day's London cable dispatch reads: "The market is dull and transactions are small; prices are nominal. We quote English Pig, Common, nominal. We quote English Pig. Common, £14. 5/, nominally." "London, Jan. 28.—
This market has remained almost entirely featureless, and prices have continued easy."
There has been no change in manufacturers' Prices. We quote: Pipe, 7½\$; Sheet, 8\$; Tin-lined Pipe, 15\$, and Block, 35\$; all less 10 \$ to the trade

Spelter and Zinc .- A moderate business Spelter and Zinc.—A moderate business has been going on all the time at \$5.80 @ \$5.87½ for Common Domestic, while nothing has transpired in Silesian, which cannot be imported here under \$5.90. Continental advices evince great firmness. Our to-day's cablegram from London is to the following effect: "The market is dull, with small demand. Prices are steady. We quote ordinary, at shipping ports, £17.5/." "London, Jan. 28.—Prices are somewhat lower at £17.7/6 @ £17.12/6, but there are no large quantities obtainable." Sheet Zinc is active and firm a 7½¢.

Antimony.—There is a good, steady demand at 141/2¢ @ 15¢ Cookson, and 13¢

#### FOREIGN TRADE MOVEMENTS.

The following is a summary of foreign rade movements for the past week: IMPORT

For the week ending February 10: Total . . . . . \$8,207,246 \$6,228,763 \$0,726,316 Prev. reported 44,297,083 36,293,766 46,009,581 Since Jan. 1.... \$52,498,929 \$42.522.529 \$55,735.897

Included in the imports were articles of

	merchandise valued as follows		
	Q	uantity.	Value
	Anvils	89	\$1.4
	Brass goods	40	4.4
	Bismuth	3	51
	Bronzes	4	5
	Chains and Anchors	98	4.3
	Liocks	9	1,0
	c'opper		16,2
	Cutlery	111	27.5
	3uns	88	17,6
	Hardware	123	1.2
	fron, hoop, tons	27	1,0
	fron, pig, tons	5,450	93.8
	Iron, sheet, tons	QI	5.1
	Railroad bars	7.759	12.2
	fron ore, tons	2,152	9,8
	Iron, other, tons	1,008	42.5
	Machinery,	101	20,80
	detal goods	209	15.1
	Nails	290	7
	Needles	13	5.7
J	Nickel	16	6.3
1	Old metal		18,97
1	Osmium iridium	1.	4.4
1	Pins	2	3
ł	Platina	E	
1	Plated ware	3	2
1	Percussion caps	5	51
1	Saddlery,	8	2.9
1	steel	51,940	173.0
١	Spelter 5	09,042	21,12
Į	Silverware	0	41
	Fin, boxes	19,923	236,01
	Vire	123	5,19
	4ABC	98,450	8.02
	The following are the impo	orts of l	eadin
	articles compared with previo	us dates	

6 weeks Same of 1882. time 1881

	100-101, Steps, Norway Iron		Hardware, pkgs 123 180	240	Ptlm.,
out	5½), \$13.00net	been considerably unsettled by these oper-	Iron, R. R., pars 7.759 21,832 Lead, pigs 3,685		Mach'
for	Steps, New Fancy Round (5-inch diam-	ations; nevertheless, although fluctuations	Steel, pkgs 51,946 172,699	56,658	Con
ati.	eter), \$6.00. 1:0-102, Steps, Star and Fluted, Refined Iron, No.	have been sharp and of daily occurrence, yet	Tin, boxes 49,993 320,782	150,212	Ptlm.,
ter	6 . V . C . N . C	prices during the week have not fallen to	Tin slabs, lbs 589.585	8,814,041	w control
nts	102, Steps, Derby, Reflued Iron, No. 1,\$3; No. 2,	any very material extent. There is great	For the week ended Feb. 11:		
	Water 1 110 - 3 - Water 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	quietude in the bona flde demand just now,	matal	\$935.500	
SI	103, Steps, Plain, Refined, No. 1, \$1.75; No. 2, \$1.24; No. 1, \$2.75	and this is the greatest drawback to the	Previously reported	4.819,520	
ds.	104, Steps, Side Bar and Side Spring 50	market at the present time, and it seems	Total since January 1, 1882	\$4.755.020	Of H
	107, Steps, Rubber Covered, Nos. 4, 5, 6, 7, 11, 12,	generally anticipated that the total stock at	Same time in 1881.	1,319,694	the .
en	13, 14, 15, 10. 107 Steps, Rubber Covered, Nos. 8, 9, 10, and	the end of the month will show an increase,	Same time in 1880	995-593	Feb
P.	Plain No. 4	which also tends to further weaken prices."	Same time in 1879	1,027,636	200
ed c. r.	107, Steps, Rubber Covered No. 3, "Fancy," and	Manufactures are unaltered. We quote: Bot-	Same time in 1878		Baldw
fth	Nos. 1, 2 and 3, "Plain,"	toms, 31¢ @ 32¢; Braziers, 30¢ @ 36¢;	Same time in 1876	5.039.985	M
	Star, Star, Diamond and Channel30	Circles, 33¢ @ 36¢; Sheathing, 28¢, and	Same time in 1875	12,165,171	Barbo
111	rod, Screws	Bolt Copper, 30¢; Segment Sheets, 33¢;	Same time in 1874	9.706,107	Bloom
Or	100, Tacks, 45	Fire-box ditto, 30%.	Sama time in 1872	1,775,043	Ca
	110, Tips, "Shaft."	TinOur market has ruled inactive dur	EXPORTS EXCLUSIVE OF RPECIE.		Berbe
OF	Try Tips " Neck Yoke" soot to	ing the week only so tons Straits changing	For the week ended Feb. 14:	-00-	Blun &
	11, Tips, "Whiffletree."	hands on the spot and 50 tons affoat, at 24 40	1180. 1881.	\$5,820,543	Ma
	115, The Benders, "Killam's, 12, Top Props, "Bradley's" Silver Nuts 50	@ 25c. There is a general tame feeling.	Total 6,825,443 \$7,399,102 Prev. reported 29,478,738 35,810,329		Boker
vs.	the saw of the Chall Name of	Landan has fluctuated considerably since our			H
	110, 117, " " Leather Nuts . 60	last, dropping at one time to £110 with	Since Jan. 1 \$36,304,181 \$43,215,431	\$38,070,181	

0	-	EXI	PORTS.
l. d	Of Hardware,	Iron	, Machinery, Metals,
8	&c., from the	Port	of New York, for the
,	Week ending	Febru	uary 14, 1882 :
8 e	Dutch West 1		
r	Ptim., gals 34	Val.	
-	I. balls, case	28	Ag. imp. pkgs & 15.403
5	Amsterdan		Cutlery, cs 5 269
3	Clocks, cs		Nails, kegs III 376 Springs, cse I 59 Metals, box I 22
-	Hamburg		W milis pkgs to me
0	Ptlm.,gls425,420	42,033	
1	Ptlmgls425,426 Mach'y, cs 3 Ag. imp., pgs 525	7,500	Tacks, cs 7 80 Cartridges, cse 1 20
t	Clocks, pkgs., 52	1,282	R.r. mtl., pgs. 426 2,910 Valves, cse r 94
-	Nails, cs 2	60	Mf. iron, pkgs 327 5,035 I. r. gds., cs 3 217
- 1	Rines, Cs. 12 Blower	977	I. r. gds., cs 3 217 Cars 22 9,221 Brss. g'ds., cse 1 30
1	z z z z z z z z z z z z z z z z z z z	350	
3	Bremen.	188	Spikes, kegs., 144 754 (locks, pkgs., 2 95 Plb. mt/s., pgs 4 181
1	Mf. iron, lbs 6 Ptg. pres., bxs 28 Hdw., pkgs 52	400	Plb. mt/s., pgs 4 181 Cop. gds., pgs 6 2,000
1	Hdw., pkgs 52 Ag. imp., pkgs 3	1,380	Cop. gds., pgs 6 2,000 Hdw., pkgs 367 6,805 Locomotive., 7,500
)	Rotterdam		Hayti.
	Ag. im., pkge. 1 Mfd. iron, pgs 6		Clocks, bxs 2 28 Mf. iron, pkgs 13 82
	Hdw., pkge 1	5	Natls, pkgs 4 55 Nails, kegs, 15 48 Pumps pkgs
	Antwerp.		Pumps, pkgs. 4 120 Ptlm., gals4710 530
	Naph., gals, 162,668 Ag. imp., pkgs 42		Mach'y, pkgs. 74 1,805
	Ag. imp., pkgs 42 Old guns, cs. 282 Hdw pkgs 10	3,150	Hdw., pkge r 23
	Hdw. pkgs 10 I. rolls, cs 5	500	Mach'y, pkgs. 4 180
	Knitng, ma.,cs. 40 Tacks, pkgs. 12 Clocks, pkgs. 3	500 142	West Hartlepool.
1	Clocks, pkgs 3 Mach'y, pkge. 1	175	Hdw., cs # 31
1	Dutch East In	dies.	Argentine Republic.
-	Ptlm., gals.331,500	38,500	Sew. ma., cs., 81 1,900 Clocks, cs 43 3,410
1	Alicante.		Ag. imp., pkgs 278 7,047
1	Ptlm., g1ls.216,151		wringers, cs., 3 55
1	Danish West In		British Honduras.
1	Mails, bus 11 Mf. iron, pkgs. 17	155 6	Ptlm., gals3,648 457 Hdw., pkgs 6 105
1	Mf. iron, pkgs. 17 I. r. gds., pge. 1 Qcksilver, flks 18 Nails, pkgs 2 Ptlm. gls. 1712	552	Iron safe 1 200 Cutlery, cs 8 187
1	Nails, pkgs 2	40	Sew ma., cs 34 310
1	Nalis, pags 1742 Nails, kegs 50 Iron, bdls 100 Hdw., pkgs 55 Agl. imp.pkgs 2 Arms, case 1	213	British North Amer-
1	Hdw., pkgs 55	389	Nails, bxs 34 64
1	Arms, case 1	33 95	Hdw. pkgs 32 205 Pumps, pkgs • 102
1	Copenhagen		Pens, cse 35
1	Ag.imp.,pkgs. 38 Mf. iron, pkgs 14	2,470	Ptlm., gals3,500 424 Cartridges,cse 1 5
1	Mach'y, pkgs. 8 Hdw., pkgs 15	290	Nails, kegs 36 270 Sew. ma., cs., 5 120
1	Clocks, bxs 27	321	Nails, kegs 36 270 Sew. ma cs., 5 120 Ag. imp., pge. 28 Mach'y, cs 32 3,415
1	Danzie.		rife mont sons so 700
1	Ptlm., gals. 141.074	11,000	Pistols, cse 1 23 British Hast Indies.
1	Lisbon. Clocks, pkgs. 46	600	Ptlm , gals.476,240 65,438
	Ptlm., gals90,586	9,640	British Australia.
1	Mf. iron, pkgs 6 Mach'y, pkgs. 28	600	Ptlm., gals 67,240 0,685
-	Liverpool.	1	HOW. DEPR. 624 ST 648
1	Mf. iron, pkgs 6 Clocks, pkgs. 205	5,694	Pumps, pkgs, 10 1.018
] ]	Platinum, bx. 1 Sew. ma., cs. 150	1,000	Nails, kegs 41 220
177	Mach'y, cs 66	5,631	Wringers, pgs 5 136 Mf. iron, pkgs. 4 53
1 8	steel roller 1	200	Springs, pairs 61 130 Nails, bxs 13 170
1	Rifles, cs 4 Hdw, pkgs 118	3,326	Ag. imp ,pkgs 158 2,889 W. mi ls, pgs. 40 1,000
10	outlery, cs 2 tng matl.,pgs 4	476	Sew. ma., cs., # 24
Н	Pistols, cse I	400	Cutlery, co 3 340
1	Br. goods, cs. 3 Arms, cs 4 Ag. imp., pkgs 29	300	Glasgow,
1	London.	1,702	Hdw., pkgs 11 337
E	tlm., gals. 483,555	0.276	Cartridges, cs 1 10
1	ldw., pkgs 182	8,936	Ag. imppkgs 3 800 Mach'y, cs 6 738
1	g. imp.,pkgs 648 Brss. g ds, cs. 10	8,371	Rines, box a 32
1 5	off iron pkgs 2	66	Havre.

Clocks, bxs 370	8,935	Mach'y, cs 6 Rifles, box	73
Ag. imp.,pkgs 648 Brss. g'ds, cs. 10 Mf. iron, pkgs 3	8,371 700 66	Havre. Ptlm., gals, 254.284	
Newcastle.		Mf. fron, cse., I	20
Clocks, pkgs 25	427	Ag. imp.,pkgs 146	6,80
Hull.		Brazil.	
Clocks, pkgs. 102 Nanh.,gals.108,000 Hdw., pkgs. 83 Pumps, pkgs. 7 Ag. imp.,pkgs. 18 Mf. iron, pkgs. 28 Great Yarmou Ptlm., gals.102,550	1.747 8.700 2.132 493 751 375 8h. 8,380	Ptim., gls173, for Hdw , pkgs 381 Pumps, pkgs. 6 Clocks, pkgs., 50 Brss. g'ds., cso 1 flach'y, cs 6 Ag. imp., pkgs 3 Barrows, bkgs 20	3,01 99 91 10 38 52
British West Inc	ties.	R R mtls.,pgs 65	3,65
Anchors 12	6x	Mf. iron, page rog	3,08
(Ansawre, pgs 34	294	Tacks cse x	5
Mf. iron, pkgs 13	137	Sew. ma., cs 21	40
Sew. ma., cs., 5	85	I r. g'ds cs., 3	31
Cutlery, cse I	25	Cutlery, cs 5	38
Ptlm., gals7655	628	Locomotives s	41,57

	Bew. ma., cs., 5	85	I. I. E OB., CS.,	3	310
)	Cutlery, cse r	25	Cutlery, cs	5	381
5	Ptlm., gals 7655	946	Locomotives		41,575
1	Nails, kegs 123	628			
ś	Hdw., pkgs 26	328	United State	8 0	1 00.
1	French West In	dies.	lombi	a.	
3	Ptlm , gals 2000	228	Mach'y, pkgs.	70	3.718
2000	China.		Cutlery, cs	SE	8,710
			Ptim., galsa	,849	554
5	Ptlm., gals. 357,500	37.538	Hdw., pkgs	198	3.677
3	Hdw., pkge 1	43	Bells	4	311
7	I. r. gds., cs a	99	Iron pickets	930	500
2	Mexico.		Nails, es	9	96
7			Iron, pkgs	175	345
-	Ag. imp ,pkgs 68	1.345	Firearms, cs.	3	8,759
	W. closets, cs. 11	238	Iron safes	20	565
1	Iron safe I	50	Boiler		1,000
)	Cutlery, cs 16	1,104	Chain, pes		234
3	Whibrrws, pgs. 32	133	Carbines, cse.	K	95
•	Revolvers, cs. 5	1.387	S. trucks, pgs	3	53
	Bells, pkgs 23	1,050	Steel, pkgs	- 8	53
1	I. r. gds., pkgs 13	650	Cop. gds, pgs.	3	49
2	Nails, cs 11	70	Rivets, pkgs	5	4.5
	Brss. g'ds., cs. 1	II	Engine	E	1,150
	Cartridges, cs 6	135	Pig iron, tons.	EO	Ego
١	Ptlm., gals3500	554	Gun caps, box	I	33
	Per, caps, cs. 6	300	Bayonets, cse.	E	300
	Needles, case. 1	600	Guns, cs	2	130
	Mf. iron, pkgs 201	2,528	Mf. iron, pkgs	79	955
	Mach'y, cs 76	4,922	Sew. ma., cs.,	184	4,310
	Shoe nails, pgs. 17	100	Clocks, bxs	4	230
	Hdw., pkgs 186	6,024	Cartridges, cs	19	673
1	Clocks, bxs 14	546	Pumps, pkgs.	4	53
4	Sew. ma . cs 84	1,473	Nauls, kegs	54	57
1	Pumps, pkge. i	35	Zine, casks	3	4.547
ı	Nails, kegs 10	39	I. r. g'ds, cs		345
1	Firearms, cse. 1	915	Ag. imp. pkgs	8	.73
1	Tacks, cs 13	144	Y. metal, pgs.	- 6	608
J	Feneguela.		Tin, bxs	15	107
1	14 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -		Cars	0	520
1	Ptlm., gals8000	885	Anchors	3	38
1	Mach'y, cs 12	296	Revolvers, cs.	2	300
1	Constantinop	la t	R. R. mtls, pgs	4	55
1			Rifles, cs	2	343
1	Ptlm., gals. 140,310	14.730	Bellows, pkgs	4	43
-1					

#### IMPORTS

Of Hardware, Iron, Steel and Metals into the Port of New York, for the Week ending

tou. Aut Adding	
Hardware, Idwin Bros & Co Machinery, pkgs., 55 rbour Twine Co Machinery, pkgs., 67 comfield J. C. & Co Cases, 3 rbecker & Co. Cases, 3 in & Co. Machines, Cs., 10	Degraw, Aymar & Co Cases, 8 Doige Alfred Cases, 8 Field Alfred & Co. Cases, 12 Anvils, 35 Folsom H, & D. Cases, 5 Graef Cutlory Co. Cutlery, cs., 9
ker Hermann & Co.	Hartley & Graham
Hdw., Cutlery and	Cases, 19
Guns, es., aa	

Loesch Albert Chains, case., 1 Lyles & Gilson Springs, box, 1 Merchants' Dis. Co. Pneumatic machine, case, 1
Mason J. W. & Co.

Mason J. W. & Co.
Cases, 5
McCoy & Saunders
Cases, 20
Moores' Sons J. P.
Cases, to
Moss F. W.
Files, cks, 3
Rogers Henry
Cases, 32
Scoville Mfg. Co
Packarps, 66 Packages, Scott W. P.

Cases, 4
Schoverling, Daly
Gales,
Cases, 8
Taylor Thomas Case, r U.S. Electric Lighting Co Packages, s Vanderbilt W. K. Iron ware, cs., sr Wiebusch, Hilger & Co. Hardware and Cut-lery, cs., 20

lery, cs., 30 Witte John G. & Bro. Cutlery, cs Witte John G. & Bro.
Cutlery, es., 3

From.
Brown Bros. & Co.
Bars, 4498
Bundles, 20
Colls, 1180
Carey & Moen, bdls., 337
Coddington T. B. & Co.
Sheet iron, bdls., 359
Sheet iron, bxs., 98
Duval H. R. Forgings, 250 Elliot, Son & Co Ore, kg., 300,00 Lundberg Gustav

Lundberg Gushav
Bars, 4928
Irwin Richard & Co.
Pig, tons, 100
Latasa F.
Ore, tons, 200
Naylor, Benzon & Co.
Bundles, 312
Bars, 2021 Bars, 9321 Ogden & Wallace Bars, 3693 Bars, 3693 Parker A. B. Rods, bdls., 96 Perkins & Choate Perkins & Choate
Boxes, 50
Pim, Forwood & Co.
Bundles, 65
Tillotsen L. G. & Co
Wire, Coils, 371
Whitney, A. R.
Bars T-fron, 180
Williamson Jas. & Co.
Pig, tone, 200
Order,
Pig, tone, 200
Old rails, tone, 1014½
Serap, lbs , 487,700

Scrap, lbs , 487,700 Scrap, tons, 510 Sheet iron, bdls., 400 Old iron, kg., 274,822 Wire, cs., 16 Rods, pkgs., 2442 Bars, 1268 Steel.

Abbott Jere. & Co. Bundles, to; Cases, \$2 Baring Bros. & Co. Blooms, 967 Downing, Sheldon & Co. Springs, too Knoblauch & Liehten stein.

stein, Rails, tons, 1800 loss F. W. Moss F. Bundles, 214 Bars, 46 Illman Station Bars. Pullman Station
Bands. 46
Temple & Lockwood
Cases, 35
Bundles, 42
Bars, 3

Blooms, 8646 Bands, 246 Pakages, 111 Forgings, 50 Spring, bdls, 4 Bundles, 68

Metals.

Ansbacher A. B.
Quicksliver, bottles
100
Bishop Victor & Co.
Platina, pg., 1
Balselis & Co. Baiselis & Co.
Copper, brs., 16
Coddington T. B. & Co.
Tin plates, bxs., 15
Degraw, Aymar & Co
Cases, 9
Dickerson, Van Dusen
& Co.
Antimony, cks., 17
Tin plates, bxs., 3834
Elwell Jas. W. & Co
Brass, bbl., 1
Metal, tce, 1
Copper, ck., 1

Copper, ck., 1
Marval Bros. & Co.
Old metal, pgs., 20
Mousante C H.
Old metal, pgs., 17 Phelps, Dodge & Co.
Tin plates, bxs. Black taggers, bzs. Reed, Holklay & Co
Zinc, powder, cks...19
Stallman & Fulton
Antimony, bbls., 30
U. S. Stamping Co

Sheet zinc, cks., 40 Orde Tin plates, bxs. Quicksilver, bottles, Spelter, ingots, 2420 Zinc plates, 13,356 Old metal, cks., 20

Tin plates, bxs, 271 Windmuller L. & Roel

quiet. Said one of the largest operators yesterday, "This weather is raising the mischief with us," all previous calculations having miscarried on account of the unseasonable warmth. Next week is the last one under the half-time arrangement for a restriction of production, but from present indications it will be renewed. It is not denied that even now there is more or less before the spring rates are fixed and the programme announced for the new year, which ordinarily takes place about March 1st. Demands for the Pennsylvania iron furnaces are represented as being quite active. Confidence is felt that new routes of transportation will soon open large markets

in the West. The Bituminous trade is temporarily The Bituminous trade is temporarily blocked on account of uncertainty arising from labor agitations, as between the Cumberland and Clearfield regions. A meeting to be held in Baltimore to-day of all the representatives concerned, to consider the question of a reduction of wages in the Cumberland region to correspond with rates. berland region to correspond with rates received by miners in the Clearfield region, will probably be decisive. The price of Bituminous Coal alongside in New York is \$5.15 @ \$5.25, and the rate of freight from Baltimore to Hoboken is \$1.45; Gas Coal to

New York, \$1.55.

Eastern freights are \$1.50 to Boston and \$1 to Providence, but the amount of business doing around the Cape is nominal. The total amount of Anthracite mined for the year is 2,124,943 tons, against 1,969,024 tons for the same period last year. The total amount of Bituminous mined for the year is 396,015 tons, against 20,004 tons for the corresponding to the correspondi ons. against 205,006 tons for the correspond ing period last year

#### OLD METALS, PAPER STOCK, &c.

The purchasing prices offered by dealers are as follows :

Copper, heavy	\$	0	\$0.16
'a light		0	. 24 3/2
Copper Bottoms"		GB	. 2436
Yellow Metal	.09	0	.30
Brass, heavy "	.12	0	. 1236
Brass, light	.10%	0	
Composition, heavy "	.15	6	.16
Lead, heavy		0	.0416
Tea Lead		0	.04%
Zinc "	.03	60	.03%
Pewter, No. 1	.1356	0	.24
Pewter, No. 2	.c8	0	.00
Wrought Iron Wton.	25.00	60	26.00
Light do "	12.00	Ca	13.00
Stove Plate	13.00	0	14.00
Machinery do		60	17.08
Grate Bars	7.50	0	8.00
Electrotype plates 10 10.	.05	0	
Stereotype plates"	.05%	(10)	
Small type	.06	60	.06%

The prices current (prices paid by local dealers) for Rags, &c., are as follows:

activity of the same of the sa	
Canvas, Linen 19 15	
White Cotton, New	31/2 C. @
NO. 2	2 % C. @
White, No. 1	4%C. @ 4%C
14 No. 2 "	2%C. @ 2%C.
Seconds	1 C. @ 1%C.
Soft Woolens	C. @ 10 C
Mixed Rags "	2 C. @ 21/4 C.
Gunny Bagging	1% C. Q
Jule Bulle	2 C. 4 2 4 C.
Kentucky Bagging"	C. @ 4 C.
Book Stock	2360. 1 2360.
Newspapers	@ 15c.
Waste Paper and Scraps "	% a. @ %c.
Kentucky Bale Rope	3162. @ 4 C.

#### PHILADELPHIA.

Office of The Iron Age, 22c South Fourth st , } PHILADELPHIA, Feb. 14, 1882.

Pig Iren.-Since date of our last report the market has been very quiet, and it is becoming evident to furnacemen that consumers are not prepared to pay the extreme rates recently demanded. Most of the large concerns are receiving No. 1 Iron, contracted for some time ago at about \$24 to \$24.50 at furnace, and they show no anxiety to increase their engagements, particularly if it involves any advance in cost. It is reasonably cer-tain, therefore, that the attempt to advance prices to \$25.50, or even \$25 at furnace, is likely to prove a failure, except in the case of two or three very choice brands. Forge Iron sympathizes to some extent, and sellers can be found at probably 50¢ ?? ton below prices asked a few weeks ago. The supply is not large, and consumption is fully maintained, but buyers have got the impression that prices will be no higher, and for that reason are inclined to postpone purchases until they are in actual need of replenishment. Sales have been made to a moderate extent, but only small lots are taken unless of two or three very choice brands. Forge extent, but only small lots are taken unless concessions are granted. A 500-ton lot of Chickies No. 1 was taken at \$26.50, delivcommand \$26 (@ \$26.50 for same delivery; No. 2 is rather quiet, and \$23 (@ \$23.50 at furnace are considered full prices, and \$22.50 \$23 for Gray Forge.

The change in the tone of the market is due to several influences, the most potent one probably being the unfavorable advices from abroad. There is a general softening in values, not only in Pig Iron, but in old material, as well as in Finished Iron. With many persons it has become customary to attach the idea of something very serious to the outlook if there is the least weakness in prices. Others appear to have no confidence unless prices are constantly quoted strong and advancing. In the present case, at all events, we think such an opinion would be erroneous. The outlook is perfectly healthy, and the change of front purely of a defensive character. The weakening in prices in foreign Iron might result in considerable unloading, unless our prices were made to correspond. The decline in breadstuffs is another imortant feature to be considered. Freights to the United States have been unusually high, because return cargoes were scarce, owing to the high prices of grain. There has been a decline of 10% to 12% ? bushel in wheat within a very recent period, and there is every reason to believe that freights this way will be lower, somewhat in proportion to the improvement in return cargoes. This may not be felt immediately, but there is little doubt that the tendency will be toward easier rates, and, in fact, foreign Iron is already offered at lower prices, based, to a great extent, on anticipations of this character. It would be as unwise as it would be mpossible for this market to offer any substantial support to the English market, so that the only alternative is to let prices down so that there is nothing to be gained by pur-chasing any but domestic Iron. So far as regards our own markets, everything is satisfactory; consumption large and likely to remain so, but, as we intimated last week, denied that even now there is more or less "whatever change there may be will be due cutting of prices in the smaller sizes of Coal, though the demand for Lump, Steamboat trade." On the whole, the outlook indicates and Broken, according to papers published in the mining region, is sufficiently active to take up all of these descriptions now produced. An improvement is hardly expected very serious decline. The controlling influence, however, will undenbtedly be from outside sources.

Foreign Iron.-Bessemer is weak and regular, with very little demand for large ts. Sales have been made at \$26 for parcels of 2000 to 3000 tons each, but it would be difficult to move larger lots unless at fur-ther concessions. Sellers are figuring on lower freights, so that on the whole buyers find the market in their favor. Offers of ransactions were at \$40.25. Stocks are said be light, and holders are firm at \$41. Mid-Stocks are said dlesboro' Iron is held at \$21.50 (d \$22 in store, and lots of 100 or 200 tons are taken at these rates. Fresh shipments would cost about \$22.50, but there is no disposition to buy. A 1700-ton lot in store is reported buy. A 1700-ton lot in store closed at \$21, but there is some doubt as to the exact figures.

Muck Bars .- The demand has fallen off

Run-out Anthracite, \$62.50 (a)

ago, and the market may be called easier, although fairly steady at quoted rates. The amount of work on hand is becoming reduced, however, and there is a disposition to enter orders at present quotations, the prospect of higher prices being somewhat remote. For the time being there is no room for complete the producers and consumers, are disposed to pursue a conservative policy; and while, as might be expected, they would like to have better prices, they plaint, either as to demand or price, and it is spring trade will prevent anything like weak ness in prices. For the best Refined Iron 2.8¢ @ 2.9¢ is quoted from mill, and 3¢ from

Structural Iron.-The market has been

lows: Tank Iron, 3.5¢; Refined, 3.75¢; Shell, 4¢; Flange, 5.25¢ @ 5.50¢, and Firebox at 6.25¢ @ 6.50¢. Skelp Iron has sold at about 3.1¢ to the extent of 1500 tons.

Sheet Iren.—The demand is remarkable, and manufacturers are almost as crowded

Wrought Iron Pipe .- There is no change in quotations, say 37½ % discount for Boiler Tubes, and 55 @ 57½ % for Gas and Steam Pine.

Steel Rails,-It is difficult to quote price with accuracy, as much depends upon time and place of delivery, size of order, terms of payment, &c. There is no doubt, howand place of delivery, size of order, terms of payment, &c. There is no doubt, however, as to the fact of prices being lower, so that \$55 offered by a good buyer would be likely to find ready takers. Buyers appear somewhat uncertain what course to take, and there is not the same urgency to place and there is not the same urgency to place orders as prevailed a year ago, notwithstanding the fact that prices are about \$5 \frac{1}{2}\$ ton lower. Indications favor the impression that railway building and renewals will not be equal to last year, although by keeping out foreign Rails there may be sufficient work to give full employment to all the American mills. There is no room for foreign rails, however, and the reductions in eign rails, however, and the reductions in prices have been made with a view of meeting contingencies of this kind. Quotations are nominally \$56 @ \$58 at mill, but, as stated, lower prices would be accepted for

Steel Blooms .- There is some inquiry but the views of buyers and sellers are wide apart. For lots duty paid \$40.50 is asked or about £6. 12 6, c. i. f., but neither offer seems to induce business

Iron Rails .- There is nothing doing ex cept in very small lots. Light sections command \$50 @ \$52; heavy, \$48 @ \$48.50; but we hear of no important transactions.

Railway Fastenings .- Spikes are quiet, nd prices a trifle easier. Large orders could probably be placed at about 37—smaller lots,

Old Rails.-The market has again falen into a condition of inactivity, and it would be difficult to dispose of large lots unless at lower rates. Lots of 100 to 300 tons for spot delivery would probably command about \$31, but it would be difficult to sell large lots at over \$30, if at that. The largest consumers are pretty well supplied, and not disposed to increase their holdings. hence the market is unsettled and weak Spot lots are scarce, however, and a few hundred tons could probably be placed at \$31 for Tees-or \$32 @ \$32.50 for Doubles.

Crop Ends-Are offered at \$27.50, but here appears to be no demand at present.

Scrap Iron,-The market is somewha uiet, and buyers are very careful in their elections. Foreign may be quoted \$31.50 (a) \$32.50, and choice No. 1 American, \$33.50 @ Cast quiet at about \$22.

Nalls-Continue in light supply, and are firmly held at \$3.40 as the lowest wholesale

#### PITTSBURGH.

[By Telegraph.]

Pittsburon. Pa., February 15, 1382. The Western Iron Manufacturers' Associa tion held a meeting in this city to-day, and after reaffirming the existing card, adjourned until the first Wednesday in April.

Office of The Iron Age, 77 Fourth Avenue, | PITTSBURGH, PA., Feb. 14, 1882.

Quietness has been the order of the day in the general Iron trade during the past week, and while there is less activity in the raw arti-Prices cle, there appears to be no falling off in the demand for the products, and the mills still have about all they can do. However, while the demand for the former has fallen off for the present, there is no de Blooms.—The market is quiet, but prices are steady and unchanged, viz: Charcoal Blooms. \$75: Run-out Anthracite, \$62.50 at Every puddling furnace is employed and pre Blooms, \$55.

Bar Iren.—There is very little change to report in this department. The demand is satisfactory, and manufacturers can secure all the business they require at about 2.8¢ for Refined Iron. There is not so much appearance of scarcity as there was some time ago, and the market may be called easier. tion has been abandoned, apparently, for the time being. The fact of the matter is the are apprehensive of foreign competition. The outlook at the present time warrants the belief that the Iron trade of 1882 will be fully equal to that of 1881, but with the largely increased capacity it is believed that our home manufacturers will be able to meet the demand, and that with the exception very quiet during the past week, and, although manufacturers have a good deal of work under way, prices incline toward ocean. In a word, the trade here and through work under way, prices incline toward weakness. Small lots from store are held at former prices, but large buyers can probably have not fully recovered from the bad effects to the ligarity and because he way and for Beams and 3.9¢ for Channels. Angles are quoted, 3.1¢ @ 3.25¢, according to

come, but the absence of inquiry is rather discouraging, and buyers could undoubtedly place orders on better terms to-day than at any time within the past three months. This may be only temporary, but sellers are keeping a sharp lookout for business, and it is probable that prices will be shaded if a desirable order comes on the market. In the meantime small lots command about as follows: Tank Iron, 3.56: Refined, 3.756; then at present and kerr keep hyper than at a posent and kerr keep hyper keep hyper keep hyper keep hyper kerr keep hyper hyper hyper hyper hyper hyper hyper hyper hyper going in on former contracts; hence, while consumers are better supplied, there is no accumulation in sale yards. Good Neutral Forge Irons may be quoted at \$25.50 @ \$26, 4 mos.; Cinder Mixture, Red-short incline, \$26.50; Foundry Grades, \$25.50 @ \$28, 4 mos., according to quality; Bessemer, \$29 @ \$30-sale, 200 tons at \$29, cash.

Muck Bar .- The market is less active and weaker, and it looks as if slight concessions might be made in order to effect sales. There is considerable offering and the arrivals are large, and as buyers generally are impressed with the belief that lower prices are near at hand, they are holding off, keeping themselves in position to take advantage of a decline, should it take place. The purchases of Muck Bar during the past few months have been much larger than ever considerable offering and the arbefore by Pittsburgh mill owners. For this were using more than they could make, while others bought it for less money than they could make it, and it would appear that some of the old-time bar mills were enabled to do better in selling Muck than by working it up into Finished Iron. We are cognizant of several mills that have been working exclusively on Muck since last fall. The latest sales reported were at \$45 @ \$46, cash. there were various reasons. Some of them were using more than they could make, while others bought it for less money than they sales reported were at \$45 @ \$46, cash, but there are now but few buyers for good Neutral at over \$45, and some refuse to pay bove \$14.50.

Manufactured Iron.-The general posiion of the market remains much the same is last week. Manufacturers still report usiness active, and that the turning away of orders is still of common occurrence. Prices are very firm at full card rates, and an advance could doubtless be maintained or a time at least, but, for reasons to which reference has already been made, manufac turers have refused to put up rates. There is to be an adjourned meeting of the Western Iron Association to-morrow. We repeat former quotations: Bars, 2.506 rates; Sheet, on a basis of 4.30¢ for No. 24; Tank, 3.30¢; Boiler Plate, 53¢ @ 74¢, according to brand. The demand for Skolp Iron has fallen off considerably and prices are easier. We now quote at  $3\psi$ , against sales about the close of the year at 3.15¢ @ 3.25¢. Skelp Iron, as is well known, is a specialty, and therefore not af-fected by the regular iron card; manufacturers are free to do as they see proper.

Nails.-There has been no change in the tuation during the past week; keeps up well, and it is expected that within the next few weeks large orders will be on the market, as it is about time for the spring trade to open. Prices remain unchang \$3.40, 60 days, with an abatement of 10 keg on carload lots, and 2 % off for cash.

Wrought Iron Pipe .- The demand con nues light, as compared with what it was all they can do; some of them are still engaged on old orders, while others are anxious to work up an assorted stock for the spring trade. Discounts on Gas and Steam Pipe remain unchanged, at 55 @ 57½ ; on Boiler Tubes, 37½ @ 40½. Oil-well Casing, 85¢ P foot, net; Tubing, 25¢, net.

Rails, &c .- The Steel Rail market here as elsewhere, is easier, and while the mills are sold several months ahead of their pro-luction, we hear of offers to sell for summer delivery at lower prices; we are cognizant of one offer, direct, to sell for the delivery in question at \$58, cash, free on board in Pitts question at \$55, cash, free on board in Fits-burgh. Railway Spikes remain unchanged, at \$3.15 P keg. 30 days, for round lots, and \$3.25 in a jobbing way. Splice Bars, \$2.70 @ \$2.80, and Track Bolts. \$4 @ \$4.25.

Steel .- There is a continued good degree of activity, and the outlook was never better for an active spring and summer trade. Best brands of refined Cast Steel, 126; hammered Cast Steel, 2 inch and under, 81/20; machin-Cast Steel, 2 inch and tilder, δ/2?; inachinery Steel, ordinary sizes, ¾ to 2 inches round, 8ψ; Spring Cast Steel, 7½ψ; Crucible Plow Steel, in slabs, 6½ψ; Solid Safe Cast Steel, 8ψ; Bessemer and Open-hearth Spring Steel, 5½ψ; ditto Plow, 5½ψ; best brands of Steel Boiler Plate, 6½ψ α 7ψ, according to size of order and time of delivery.

Bessemer Blooms and Billets—Are oted all the way from \$55 @ \$75 P has not been large

@ \$40; Wrot

large blocks of Pig Iron, bought some time ago, when prices were considerably lower than at present, and kept back by the ruilway blockade, are now coming forward, and consumers appear disposed to use this before buying more. The receipts have been unisually large for several weeks in succession, but nearly all of that coming forward is going in on former contracts; hence, while going in on former contracts; hence, while some first properties of the price of the price

Nails.—The demand for Nails continues active, and the market is firm at prices quoted: \$3.45 \$7 \text{keg} for rod. to 60d. for carload lots, and \$3.55 for smaller orders, with the usual discount off.

Steel.—Tool Machinery and Agricultural Steel has undergone no change and the quotations given are firmly adhered to; we quote: Tool, 12¢; Machinery, O. H., 5½¢; Crucible Machinery, 7¢; Hammer, 2 inches and probe \$\frac{2}{3}\cdot \text{very constraint}\$ under, 8¢; over 2 inches, 9¢; Cast Spring, 7¢, and O. H. Spring. Tire and Sleigh Shoe, 5¢. Sheet, first, second and third quality, 12¢, 10½¢ and 8½¢, respectively; Crucible Plow, 6½¢; Eagle Plow, 5½¢; Iron Center Plow, 10146, and soft Steel Center Plow,

Scrap Iron.-This market shows no

#### CHATTANOOGA.

Office of The Iron Age, Market and 8th Sts., CHATTANOOGA, Feb. 13, 1883.

The trade in heavy materials in this district was never steadier than now. The Iron trade has not perceptibly felt the effect of the slight financial flurry in New York. The weather continues extremely unfavorable to the movement of material, and transactions are considerably curtailed by the impassable condition of the country roads.

Pig Iron.-There is no change in rates We hear of enlargements of capacity and projects for new plants, almost daily, in some part of the district. Several of the old furaces on the Cumberland, in the brownematite region, are being enlarged a modernized to meet the heavy demand for Car Wheel and Boiler Metal. We quote: No. 1 Foundry, \$25 @ \$27; No. 2 Foundry, \$22 @ \$24; Gray Forge, \$20 @ \$21; White and Mottled, \$19 @ \$20; Car-wheel Metal, \$38 @ \$40.

Ores.-We quote: 50 & Brown Hamatite ton, \$2 @ \$2.75; Red Fossil, \$2 @ \$2.25, elivered at furnace.

Miscellaneous Articles .- Old Rails are ong at \$29, the supply being smaller than demand. Scraps are in fair supply and steady at last quotations. Wrought Scrap, \$24 @ \$27; Cast Scrap, \$14 @ \$17; Old Wheels, \$29 @ \$31.

Nails.-The nail market continues very teady and prices rule strong at \$3.40 rates. The supply in the hands of dealers and mills lighter than ever known at this season of the year. The demand is entirely from con-sumers, there being no speculative movement

Manufactured Iron.—The good effect of the conservative action of the Western Iron Association in retaining the December card has been apparent here. Bar is steady at \$2.75 rates, with plenty of orders in hand to keep the mills busy for three months. We quote: Railroad Spikes, \$3.30; Track Bolts, \$4.25. Fish Plate, \$2 \$4.25; Fish Plate, \$3.

Coal .- One or two small mines producing only grate Coals in Alabama have closed on account of the small demand. The warm weather has not been good for big prices, and those who started with Lump at \$5 in Sovember have not maintained their We quote Fancy Lump, \$4, and Common

Coke.-Furnace Coke, \$3 at point of con ption; Foundry, 10¢ @ 12¢ 7 bushel.

Steel and Iron Rails,-There is very ittle demand for Iron Bars. Here and there small lots are required for renewals, but the interest is rapidly becoming a nominal one. We quote: Steel, \$60 at mill; Iron. \$45 We quote: @ \$49; Small T. \$55 @ \$57.

#### BOSTON.

FEBRUARY 11.-The demand for Pig Iron still quoted all the way from \$55 @ \$75 \{\partial \}?

Seran.—Wrought Scrap is quoted at \$33 \{\partial \} \\$35 \{\partial \}?

@ \$35 \{\partial \}?

Proved to market has presented a quiet but firm appearance. There is no pressing inquiry for Iron and but little is being offered, and the furnaces are reported to be delivering most of their output on contract. The demand and supply appear to be evenly balanced at present and the market has presented a quiet but firm appearance. There ported to be delivering most of their output on contract. The demand and supply appear to be evenly balanced at present and the market has presented a quiet but firm appearance. There ported to be delivering most of their output on contract. The demand and supply appear to be evenly balanced at present and the market has presented a quiet but firm appearance. There ported to be delivering most of their output on contract. The demand and supply appear to be evenly balanced at present and the market has presented a quiet but firm appearance. There ported to be delivering most of their output on contract. The demand and supply appear.

Coke.—The situation remains about as noted a week ago; the volume of business is large and would be much larger were it not for the impossibility of getting the necessary. and the market large and would be much larger were it not for the impossibility of getting the necessary transportation, which is a most important matter in the Coke trade. No change in prices, \$1.75 per ton, free on cars at ovens, and \$1.90 @ \$2 for small foundry orders.

Coal.—This important Pittsburgh interest continues in an unsatisfactory condition; the down river markets are all overstocked and very dull, and prices are low in consequence. It is claimed that at Cincinsati and New Orleans, Coal is being sold for less than actual cost.

Window Glass.—Trade over for the seaWindow Glass.—Trade over for the seademand which will be put upon it. It is not, however, thought probable that the consumption will be larger than for 1881. Prices at shipping ports for American Pig are \$26,50 or No. 1 X; \$25 @ 25.50 for No. 2 X, and \$24 for Gray Forge. Small spot lots command \$2 @ \$3 \$2 for above these quotations. The market for foreign Iron is firm but very quiet, as buyers are not inclined to pay the prices demanded by sellers. Very little stock is held here and the indications point to very small importations for some time ost.

Window Glass.—Trade over for the seaon; no change in card or discounts.

CHICAGO.

Office of The Iron Age.
36 and 38 Clark Street, cor. Lake Street,
CHICAGO.

CHICAGO.

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CHICAGO.

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CHICAGO.

Office of The Iron Age.
37 Shotts, \$27.50. Old Rails.—The demand is small but the market is firm at \$3.2 for American.

Manufactured Iron.—The deAmerican.

Manufactured Iron.—The deplace orders at combination prices—say 3.7¢ for Beams and 3.9¢ for Channels. Angles are quoted, \$3.1¢ @ 3.25¢, according to specification.

Plate and Tank Iron.—There is no improvement to notice, the demand being unusually light. There is still work enough on hand to keep the mills busy for some time to

broken condition, and the mills are steadily busy on back orders and continue difficult to obtain prompt delivery. It is very probable prices will remain steady for some time, though we hear of rumors of a somewhat and though we hear of rumors of a somewhat easier feeling, we find nothing to substantiate them. We quote Bar firm at \$3, and as high \$3, 20 (2 \$3.25 is paid for Fall River or English brands, such as Stirling. Horse the such as the such as Stirling. Horse the such as the such a w \$5.25 for carload loss delivered here, and at \$5.50 for jobbing lots. Manufacturers' prices are unchanged. We quote: Bar, 6½ €; The pipe, 7½ €; Sheet, 8 €; Tin-lined Pipe, 15 €; Tin Pipe, 35 €—all less 10 %. Spelter.—The demand is moderate and the quotation is unchanged at 6 €. Sheet Zinc is quoted at \$€. Tin.—The Tin market in London went up during the week to £118, but is now at £12. during the week to £115, but is now at £113. The market here has become a little firmer, and Pig Tin is quoted at 25% @ 25%%, and jobbing lots at 25% \$\phi\$ @ 25%%. Tin Plates.—
The demand is fair but the market shows an saster tone both abroad and here. We quote: Charcoal Bright, \( \phi \cdot \cdot

30	75 @ 90 @ .50 @	2.75 31 00
30	75 @ 90 @ . 50 @ . 00 @	2.75 31 00
30	90 @ .50 @ .00 @	2.75 31 00
30	. 50 @ .00 @	2.75 31 00 1%
30	(B)	31 00
	(13)	136
	(13)	
	136 GL	x36
3	.25 @	
	(2)	1.00
	60 60	So.
	60	50
	45 60	50
	30 6	40
		. 60 @ . 60 @

#### CINCINNATI.

FEBRUARY 13 .- Pig Iron .- Sales in the past week have been confined to orders in a small way to meet present wants. There is no disposition on the part of producers or conammers to enter upon contracts for considerable quantity for late delivery. Supply and demand, it now seems, will govern for some time to come. The annual meeting of the Stove Makers in the United States was held bere last week. After their deliberations took shape, the Pig Iron makers, Pig Iron consumers and the Pig Iron sellers captured them for a dinner at the Burnet House. Quothem for a dinner at the Burnet House. Quotations for the past week: No. 1 Hanging Rock Charcoal Foundry, \$29,50: No. 1 Hanging Rock Coke, \$28 @ \$29; Southern and East Virginia, \$27 @ \$28; Best Stonecoal, \$27 @ \$28; Silver Gray Softeners, \$26 @ \$26.50; No. 2. \$1 less on all grades; Virginia and Southern Forge, \$24 @ \$25; Hanging Rock Charcoal Forge, \$26 @ \$27; Scrap Car Wheels, \$20; Scrap Rails, \$28 @ \$30; No. 1 Wrought, \$1.10 @ \$1.40; Cast. 70¢ @ \$1; Bar Iron, \$2.60, card rate.

reduction in prices.

HUL BLAST CHARCOAL
Missouri
Missouri None offering
Dhitti
Southern 27.00 @
MILL TRONS.
Red-short 26.00 @ 28.00
Seutral. 25 0 1 (\$ 20,0)
CAR WHEEL AND MALLMARILE IPONS.
Missouri 25.76 @ 14.69
26 athern 35.00 65 38.00
Ohio 32.05 65 43.00
E-100

enabled to analyze matters, the demand is of such a matter that it must have arisen, whether pig iron were 35/ or 95/ per ton. There may be departments in which the chapmess of values has induced buying, but I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as a whole, the work now in I faucy they are wholly exceptional, and that, taken as

Tennessee, as well as in Mississippi, are in arrears.

#### BALTIMORE.

W. N. WYETH, Iron and Steel Merchant, 46 and 48 South Charles street, reports us the following, under date of Feb. 13, 1882: The principal feature noticeable in the Iron Market for the past week is great buoyancy and decided upward tendency of values, Horse Shoes having taken the lead with an advance of 50¢ Pkeg, and all orders booked subject to price ruling at date of delivery, indicating

Committee to the same trace to the	W 00 C				
Ref. Bar Iron, 1 to 6 x 1/4 to 1	in the	2 8-10 2 8-10	66	3	40
and Square		2 8-10 316			
Band Iron, from 1% to 4 in. wide, Horse-shoe Iron	60	3	0	3%	19
Norway Nail Rods	16	51/2	0		¢
Machinery Steel		9	@	9%	¢
Common Horse Nails	6.6	10	0	74	¢
" Mule shoes			. 5	.87	1/2

past week. Prices are firm,	, as follows:	
No. 1 Scotch Pig Iron	26.00 @	29.50
No. 1 Anthracite Pig Iron	27.00 @	29.00
No. 2	24.00 @	25.50
No. 3	@	23.50
No. 1 Virginia Coke Pig Iron	25.00 (8	
No. 2	22.50 77	23.50
No. 3	20.00 @	23 00
Veginia Charcoal C. B. Wheel 1	ron 34.00 @	36,00
Old Rails.	29.00 (%	31 00
Wrought Scrap, No. 1	26,00 (3)	28,00
Cast Machinery Scrap.	20,00 @	21,00
	2.5 @	.03
Horse Shoes (Tredegar)		
Muse.		5.00

### Our English Letter.

Review of the British Iron, Steel, Metal and Hardware Trades.

> (From our Regular Correspondent.) London, Eng., Jan. 30, 1882. THE SITUATION

has not undergone any remarkable alteration during the week, although crude irons have become a trifle easier under the influence of an unsettled and irregular market at Glasgow, Continental complications of a political and financial nature, continued dear money here, and the hindrance to shipping business of business. This is the more certain seeing that Glasgow leads the van and Glasgow is ruled by the doings of speculators infinitely more than any other iron trade market. At all events, Scotch warrants have fallen and makers' iron has also become weaker, hence Cleveland and the other large centers have followed suit, and at the time of writing pig irons may be considered lower and less firm than at the commencement of the year. Nothing of real moment has occurred in the interval to account for this depreciation, but the fact is as stated. Glasgow has its bête noir in the shape of the enormous stocks to which I have so often alluded, and no amount of pleasant writing or specious explanations will dispose of it. So long as there are nearly 1,000,000 tons of pig iron in re-serve in Scotland alone, so long, and no longer, will the iron markets of Europe relonger, will the iron markets of Europe remain weak and unsettled. It cannot possibly be otherwise, and to argue in the opposite vein, as some do, is to insult one's common sense and crdinary reasoning capacity. Take the present state of the trade as an example. From the works at home we have nothing but pleasant and hopeful accounts. The consumption is declared and admitted to be enormous and unprecedented, yet prices have not moved in any appreciable degree, and the smelters have some difficulty in maintaining their selling rates. This would not be the case in the absence of the surplusage in Scotland. Then again, look around us on in Scotland. Then again, look around us on every side. All the works on the Continent Are busier than ever before. They are full of work, and for the most part refusing further commissions. This is true of Belgium, ther commissions. This is true of Belgium, France and Germany. With you activity is the rule, and we know, by results, that you have the utmost difficulty in supplying your own requirements. Here again we may point to the bad effects of the Scotch reserves in the absence of which iron results. are busier than ever before. They are full serves, in the absence of which iron would to-day be of higher value all the world over. In saying this I do not lose sight of certain obvious facts, nor do I wish to confuse cause with effect. It may be urged that the low prices with effect. It may be urged that the low prices have been the prime causes of the present general activity, and that had the selling rates of pigs been higher, the demand might have been choked off. I can see the feasibility of this, but I do not now admit it as a statement of facts. So far as I have been enabled to analyze matters, the demand is of such a nature that it must have arisen, whether high iron were self-or of the fem.

several of the bar mills entering in upon that is not the most remote chance of giving all class of work. Nails are scarce, stocks are light and factories demanding full card. The continued high water affects business seriously, and collections in West Kentucky and of a large American demand for it, or (2) by a large and resolutely continued limitation of the production. You know much better than myself whether the former of these condition is probable. It can aver that the second is highly improbable. It will, perhaps, be safe to say that neither is a probable contingency, so that the logical inference is—we shall not see any early great rise in selling values in this market. Should the conditions alter the results would necessarily be different.

#### AT THE WORKS

there is an abundance of occupation, scarcely a single exception of note to this rule being on recent record. The marked bar houses in South Staffordshire are reported to have "filled up" considerably since the quarterly meeting, and are now fairly well employed. albeit not so busy, even now, as the producers of second rate and common iron. I do not hear of any particularly important alterations in finished iron quotations, but it is believed that should no recovery take place believed that should no recovery take place in crude qualities within the next week or two, we shall not have any changes in an upward direction during the remainder of the present quarter. Marked bars remain as before, viz., £7. 5/ for Philip Williams & Sons "miter," £7. 10/ for B. B. H., "Netherton," &c., and £8 for John Bradley & Co.'s "S. C. Crown," besides the £8. 2/6 for Lord Dudley's round oak iron. Medium bars still range from £7 @ £7. 10/, and common, £6. 15/ @ £7. 10/. Sheets are firm at £8. 5/ @ £8. 15 for common singles, up to £14 and 15/@ £7. 10/. Sheets are firm at £8. 5/@ £8. 15 for common singles, up to £13 and £14 for special brands. Braziery sheets for hollow-ware purposes sell at £8. 2 6 @ £8. 5/. Calvanized iron is firm on the basis of £15. 10/ for ordinary, 24 W. G. in bundles in London. Fencing wire steady and in good request. Hoops are quiet at £7. 10/ and upward, according to sizes, brand, &c. Cotton ties are £8. 10/, less 3 % delivered f. o. b. Liverpool. Welsh bars are stiff at £6 at works. In iron rails there is little new business doing, quotations remaining at £5. 10/ for 50 lb and up sections. There are some American inquiries for old rails, but the c. i. f. offers are below the prices realized for home use, hence the business done on your account is limited. Just now old D. H. that your demand will not be a neavy one this year. Tin plates are steady, but quite without excitement, at late rates. Freights are as last quoted. All freights for iron to American ports will be advanced 2/6 pp ton on February 1st. SOME CURRENT QUOTATIONS

which may be useful to your readers, and are not generally obtainable, are here ap-

Best	rolled.	o to	4 gaug	e				€7.	10/
	8.6		- 11					8.	10/
Best	drawn	anne	aled, o	to 6				10.	15/
		20		7				10.	15/
	6.6			- 8				II.	
	8.8	5.6						TE.	10/
	4.6	1.6		10					15/
3mal	l round	is and	l squa		7-16& £8. £3-1 £10,	5/	£9.	£9.	10/
MPRO	OVED ST	PEEL I	PENCIN	G WII	E, "0	BLFFI	N'1 H	BA	ND.
Size-	-Gauge	al. 10	ton.£	6	217	14/£	8	1 6	9

ound or oval, \$\mathbb{\text{\$\text{ton}\$}}\ \text{ton}, \text{\$\mathbb{E}\_1 \mathbb{\text{5}}}, \text{\$\mathbb{E}\_2 \mathbb{\text{5}}}, \text{\$\text{10}} \text{\$\text{2}} \text{\$\exititt{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exititt{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{

		'Shield'	Brane	1.		
Best best	anneale	d, 20 gau		824		
Plain, for	w'king t	1D,22	1.1.0	24		
4.1	1.0			24	4.0	
3.5	**	26 "		26		
8.6	4.6	28 11				
F. o. b.	London	or Liver	rpool.	Disco	int 25	%.
		ANCH	DRS.			
Cwt Common.	W cwt.		16/1	2 16/3	15/0	4
Common,	N. P. T.	, Pewt.	. 21/3	21/0	20/9	30/
Cwt Common.	mewt		15/9	16/	0 8	6/3

N. P	. I., W CWI.	. 17/	0	18/
	CHAINS AND	CABLES.		
Ships' Cables	s, Stud Link	(Lloyd's	Public	Test).
Inch 3/2 Per cwt. 17/0	11-16	3/4	13-16	78
Inch15-16 Per cwt. 15/1	1 & 1 1-16			
Ships' Cables,	Short Link	(Lloyd's	Public	Test)
Inch % Per cwt. 17/3	16/9			
Inch 15-16	1 & 1 1-16	1% to		136 to

Ships' Cub	les, Stud Li	nk (Adn	iralty T	'est).
			13/0	12/9
Inch15-16 Per cwt. 12/6	12/3	8	2/0	19/3
Ships' Cabl	es, Short L	ink (Adı	niralty 7	l'est).
Inch % Per cwt	11-16	13/6	13/3	13/0
Inch15-16	1 & 1 1-10	136	to 136	136 to

Best Proved	Short L	mk Riggi	ng can	111.
Inch 3-16	3/4	5-10	36	7-1
Per cwt 20/0	22/6	19/6	87/3	15/
Inch 1/2	9-16	56	11-16	3/4
Per ewt 14/3	14/0	13/0	13/0	13/
Inch 13-16	36	15-16 16		
Per cwt 13/0	19/9	12/6		
Best Best Cra	ne Chai	n (Admir	alty Te	st).
Inch 3-16	3/4	5-16	36	7-1
Per ewt 37/6	28/6	25/6	22/0	18/

Per cwt		16/9	10/3	16/0	3
luch Per cwt	. 13-16	3/6	15-16	150	risto
	pecial Be			0.1	
Inch Per cwt		35/9	5-16 28/9	36 25/3	2
Inch Per cwt		9-16	5/8 19/3	18/9	2
Inch Per cwt		3/6	15-16 1	27/3	

#### THE MONEY MARKET

has been extremely unsettled during the past week, owing to the Bourse panics in France and elsewhere on the Continent. A general "flare-up" seems to have been on hand in Paris, whence news of fresh disasters of great magnitude has been telegraphed this afternoon. We have also tidings of additional failures at Dublin, Cologne, Hamburg, Lyons, failures at Dublin, Cologne, Hamburg, Lyons, Frankfort, Berlin, Vienna, &c., hence there is much reason for apprehending very serious disturbances of our own money market. A few stock exchange stoppages have already been announced, but the heaviest only reached £80,000. Gold has begun to drain to the Continent, however, nearly £1,000,000 having gone there during the week, and the exchange is still in favor of that movement. Under these circumstances the Bank of England authorities have to-day advanced the land authorities have to-day advanced the official rate to 6 per cent—a figure which will hit some of the already over-weighted speculators very hard indeed. The Bank of Belgium has advanced to 9 per cent. and the Bank of Holland to 5 per cent.

SCOTCH PIG IRON has been dull since my last letter, but your cable reports are now so full that I need not do more here than present a few statistics, which are: furnaces working, 105 against 122 last year; total shipments to date in 1882, 26,507 tons—comparative decrease 1188 tons; in Connal's stores 631,090 tons, against 513,829 tons a year ago; importations from Middlesboro' into Scotland in 1882, 21,740 Middlesboro' into Scotland in 1882, 21,740 tons—increase, 3950 tons. James Watson & Co. write from Glasgow Jan. 27: "The Scotch iron market has been dull and irregular this week, partly owing to the financial difficulties in France and fewer inquiries coming from abroad. On Monday the price of Warrants opened firm, as high as 51/5 being paid, from which it receded to 50/11½ cash On Tuesday the market was flat and as low as 50/7½ was accepted. on Wednesas low as 50/7½ was accepted. on Wednesday the market rallied to 51/2 per ton. Yes terday the tone was easier and a moderate business was done between 51/3 and 50/10 per ton. To-day the market opened quiet at 50/9 @ 50/7½ cash and afterward improved to 50/11, closing sellers thereat, buyers offering 50/10½ per ton. The shipments last week were 7742 tons, as compared with 4608 tons for the corresponding week of last year." We quote:

							No.	T.	No.
G. M. B., at Gla	sgow						52		4
Coltness.	0.0						. 61		5
Langloan,	0.0				 		. 62		5
Gartsherrie, at	Glasgo	W.					. 61		5.
mmerlee,	0.0					۰	60	16	5
Calder,	0.0		 				. 60	16	0
Carpbroe.	0.0						. 56	16	51
Hengarnock, a	t Ardro								51
Eglinton.	4.6						. 52	1	49
Daimellington.	0.0						. 52		50
Shotts, at Leith							61	6	55
Kinucil, at Bo'n	1056		 				51		.50
Carron, at Graz									52

#### CLEVELAND IRON

			wing quotations, which
			b. makers' wharves in
8	ie Tees le	ss the usus	al 2½ per cent. cash:
N	o. r Found	ry 45/6	Mottled 42/6
1 .	8 60	45/	White 41/
1 .		43/	Refined Metal 60/
	4	48/6	Kentledge 43/
1	4 Forge	43/	

The official return of Mr. Waterhouse, accountant to the Northern Board of Arbitration and Conciliation, is as under: Having collected from the firms and companies be-longing to your board the returns of their sales of manufactured iron during the three months ending December 31 last, and having verified the same by an examination of their books, I certify the average net shilling price per ton to have been as follows: Of all classes of iron, \$5. 18/7; of all classes of iron with the exception of rails, \$5. 18/11. Beneath are statements of the different classes of iron sold, and the average net selling price of each: SALES DURING THE THREE MONTHS ENDING DE-CEMBER 31, 1881.—ALL CLASSES OF IRON.

Plates11,525 3 2 8 65,39 6 Bars 20,332 6 0 2 11,93 5 1 Angles. 44,444 6 0 19 20.09 5 Total170,530 11 0 20 100.00 5 1	ton.
Plates111,525 3 2 8 65.39 6 Bars 20,332 6 0 2 11.93 5 1 Angles4,244 6 0 19 20.09 5 1 Total170,530 11 0 20 100.00 5 1	s. d.
Total170,530 11 0 20 100.00 5 1	6 1.58
Total170,530 II 0 20 100.00 5 I	1 8.55
Total170,530 11 0 20 100.00 5 1	9 4.25
	9 7-55
	8 7.19
SALES DURING THE THREE MONTHS ENDIN CEMBER 31, 1881.—ALL CLASSES OF IRON WIT EXCEPTION OF BAILS.	
Avera	ge net
Weight Per- selling	price
Invoiced, centage per	ton.
Tons. cwt. qr. lb. of Total, & s	. d.
Plates111,525 3 2 8 67.14 6	8.55
Bars 20,332 6 0 2 12.24 5 10	0.33
Angles . 34,244 6 0 19 20.62 5	0.35

have been a trifle easier, owing to second-hand parcels being offered at rather below makers' prices. Mixed numbers may be called 62/6 to 63/ and makers' rates;

leator	68/	07/	05/
Lonsdale	64/6	63/6	62/6
Workington	64/0	63/6	02/6
West Cumberland		4.44	110
Lowther	64/6	63/6	60/6
Moss Bay			62 6
Distington	64/	63/	62/
larrington	64/6	03/0	62/6
3 -lway		63/6	62/6
Maryport	64/6	63/6	62/6
Cumberland ore is 16	/ to 18/	at the	mines,
and Spanish, 15/6 to	17/ ex	ship.	There
are 65 (of SI) furnace	e of weat	ele in il	u die-
rict, the estimated	weekly	output	being
32,500 tons of hemat			

in the district. In the North of England and Staffordshire, the ironworkers are manifesting extreme dissatisfaction with the operation and incidence of the aliding scales, and have formulated demands for altering the and have formulated demands for altering the bases upon which these severally stand. They ask for all sorts of childish and foolish changes and "restitutions," and generally conduct themselves as they have always done when they have thought business to be improving. Among their "points" just now is one requiring their wages to be 1/ in the £ on the average of all classes of iron, and another that 7½ % extra be at once paid for the reductions made during the late era of bad trade. had trade.

#### STAFFORDSHIRE WAKING UP.

It is a matter very hard to believe, but I think I am warranted in stating that South Staffordshire is at last waking to the fact that there is such a material as steel, and that the past tense may be very largely ap-plied to what was once its own staple product. It is understood, indeed, that duct. It is understood, indeed, that dephosphorization is about to be introduced into the locality, experiments having been made already with some of the ordinary pig iron of the district. A trade paper here says that Staffordshire pig is better than Cleveland for the basic process. As I understand the matter, that is not quite true, the Staffordshire pig being rather too good—not having sufficient slighest tention to give the high heat required. cient silicon to give the high heat required— for the purpose, as compared with Cleveland. That Staffordshire may produce good steel, however, nobody need doubt.

#### GENERAL ITEMS

Trade at Sheffield is very good, especially at the large works. John Brown's and Cam-mell's have orders for armor plates sufficient to keep those departments going for eighteen months. The era of universal peace and good months. The era of universal peace and good will is still distant! The Rhymney Iron Co. (Ld.!) do not pay an interim dividend. Krupp has an order for 14,000 tons steel rails for Spain, delivery over three years, at 163 francs at Santander. The sales of tricyles is largely at Santander. The sales of tricyles is largely extending throughout England, bicycles being less popular than formerly. A large railway tools contract for crowbars, augers, hammers, &c., on Brazilian account, has been secured by a Birmingham house. Sheffield axes are being largely sent to Canada. Bolckow-Vaughan's are shipping rails to Panescole, and routines of a coder. rails to Pensacola, and portions of an order for 15,000 tons of blooms are being sent from West Hartlepool to the United States. Among the most recent changes of prices, &c., are: An advance of 10/13 ton on cut tacks; a reduction in discounts of 11/4 per cent. on copper and zinc sash chain; a reduction in discount of 2½ per cent. on sash chain, plates and hooks; a rise of 5 per cent. on net prices of tin-plate work; a reduction on het prices of tim-plate work; a reduction in discount of 5 per cent on tinned and 2½ per cent. on enameled hollow-ware; a rise of 5 per cent. on the net in wrought hinges; a reduction in discount of 2½ per cent., and a rise of 3½ per cent. on net prices on spoons and forks

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#### FOREIGN.

#### PHANCE.

PHANCA.

(Moniteur des Interets Materiets.)

PARIS, Jan. 29, 1882.—Metals.—The cold and at the same time dry weather has revived business. Metals, with the exception of Speller, have, however, been flat and lower in response to the break in London and Holland. We quote: Copper, Chili Bars, 195, Early, 5 francs \$\psi\$ toc kg.; Instots and Slabs, 185; Best Selected, 190, and pure Corocoro Ore, 186. Banca Tim, 302,50; Billiton, Straits and Australian, 300, and English Common, 295. Lead, 37 & 37.55, and Speller, 47 & 47.50. Fron—While speculative values on the Stook Exchange have been brought to grief, the French iron market forms a pleasing contrast, for not only are prices as firm as ever, but in the Center and South of France Merchant Iron has even risen to francs \$\psi\$ too, and a rise of 5 frances seems to impend at the North. The same steadiness of values is noticeable both in Germany and Belgaum, and at Luxembourg Fig Iron has advanced another 5 francs. The outlook in France is indeed so solid and promising that we believe a good year is in prospect. In the Ardennes great activity is displayed, especially in the turning out of railroad material. Many works extend their working capacity, the more so as orders for arsenals, shipyards and machine shops also multiply. No. 2 Merchant commands in the district 19 (2019.) of frances. Bolts have risen 1.50—2 francs \$\psi\$ too kg. In the Cher, the Bigney Works, eclebrated for their charcoal fron production and Wire for cables, have recommenced operations after stopping two months for repairs. In the Haute Marne, general satisfaction is expressed, both as regards the amount of orders and prices obtained. Coke Merchant Iron is worth in the basin 21 francs, and Mixed 22, 50 23. Machine Mixed 22. Sheet Iron has risen 10 francs \$\preceq \text{ton}\$ to the latter half of 185. No. 2, English style, is worth 26 26, as to number. The Lofre and Rhome is loaded down with orders. In the Meurthe and Moselle Puddle Pig is firm at 7 francs at Longwy, Celiverable in all 1882. Stocks N. P. T., Wewt. 21/3 16/0 16/3 17/3 N. P. I., Wewt. 16/0 16/3 17/3 N. P. T., Wewt. 16/0 16/3 17/3 N. P. T., Wewt. 16/0 16/3 17/3 18/0 17/3 N. P. T., Wewt. 17/6 18/0 17/3 18/0 Cables, Stud Link (Lloyd's Public Test).

Cables, Stud Link (Lloy

#### BELGILB. (Revue Universelle.)

have been a trifle easier, owing to secondhand parcels being offered at rather below
makers' prices. Mixed numbers may be
called 62/6 to 63/ and makers' rates:

No. 1. No. 2. No. 2.

Cleator. 68/ 67/ 65/
West Cumberland.
Lowther. 64/6 63/6 62/6
West Cumberland.
Lowther. 64/6 63/6 62/6
Distington. 64/6 63/6 62/6
Maryport. 64/6 63/6 62/6
Maryport. 64/6 63/6 62/6
Maryport. 64/6 63/6 62/6
Maryport. 64/6 63/6 62/6
Cumberland ore is 16/ to 18/ at the mines,
and Spanish, 15/6 to 17/ ex ship. There
are 65 (of 81) furnaces at work in the district, the estimated weekly output being
spanish, 15/6 to 18/ at the mines,
and Spanish, 15/6 to 18/ at the mines,
and Spanish, 15/6 to 18/ at the mines,
and Spanish are causing some uneasines in different

Large purchases of these pigs for the United
States are reported to have been made, but
details have not become known. That sales
have been effected there is no doubt, but
their size is problematical.

LABOR MOYEMENTS

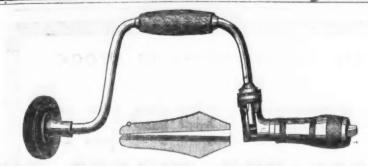
are causing some uneasiness in different
parts of the country. In the Maryhill district of Scotland, 800 ironmolders struck
last week for an advance of 7½ %, which
they say was gradually taken from them
during the period of dull trade. Their demand has been conceded by the largest firm

have been a tridle eatier. A cood many orders have been
mand has been conceded by the largest firm

have been a tridle eatier. A cood many orders have been
mand has been conceded by the largest firm

BELGILIA.

BRUSSELS. Jon. 29, 1882.—Iron.—The Belgian
market remains firm. work being abundant and
the outlook favorable, abundant and the outlook favorable, abundant and
the outlook favorable as been arrested for the moment, which is but natural and seening sub und the outlook favorable as but the currents of work but the currents of weakly the outlook of work but the currents of was have been arrested for the moment, which
the outlook favorable and affording people a chance to take
formed from there has ven been and from the state of sold and the coultook favorable at the favor



After having made almost every kind of a Bit Brace and tried them on the market, we find that our BARBER IMPROVED BRACE, as seen in this Cut, is the only one which gives universal satisfaction. During the past six months we have made some slight changes on this Brace, which remove all objections to it and make it absolutely perfect. We are aware that other Braces are sold at a less price, but they are also made at a less cost. Everything which goes into the Barber Brace is of the best and most expensive quality, and one of them will outlast six of any other kind. The Sweeps and Jaws are of steel, the Head of lignumyite and Revolving Handle of rosewood. It is highly polished and heavily nickel plated. The Jaws will hold, without any fitting, Tool Shanks of every shape, including Round Twist Drills. When furnished with the Ratchet Attachment, for boring in places where the Sweep cannot be revolved, it is the only Brace which will answer that purpose. We have not changed the price for many years, and do not anticipate any change in the near future; but from year to year we have been adding to the quality so as to make the cost to us double what it was ten years ago. We have recently added to our manufacturing facilities, and are now prepared to supply the world with Braces. After having made almost every kind of a Bit Brace and tried them on the market.

#### LIST PRICES.

No. 10—14-inch Sweep, per dozen...\$33.00 | No. 14— 6-inch Sweep, per dozen....\$21.00 | No. 11—12-inch Sweep, per dozen.... 30.00 | No. 31—12-inch Sweep, per dozen.... 39.00 | No. 12—10-inch Sweep, per dozen.... 27.00 | No. 32—10-inch Sweep, per dozen..... 36.00 | No. 13— 8-inch Sweep, per dozen.... 24.00 | No. 33— 8-inch Sweep, per dozen..... 33.00

MILLERS FALLS CO., 74 Chambers St., New York.

### HEATON & DENCKLA HARDWARE CO., Hardware Commission Merchants,

507 Commerce Street, Philadelphia.

E. & S. BROOKE'S "Anchor Brand" Nails, Brads, EXCELSIOR MILLS. Genuine Turkish Emery. MALLORY, WHEELER & CO.'S Door and Pad Locks. UNION MANUFACTURING CO.'S Butts.

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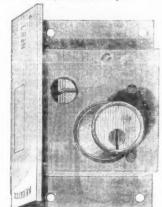
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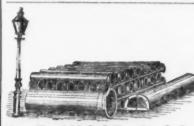
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Genuine and Mechanics

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## CHAMPLAIN Forged Horse Nails.

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HOT FORGED AND COLD HAMMERED POINTED, MADE OF BEST NORWAY IRON AND WARRANTED.

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Our blast furnaces have sold their output for several months ahead. Prices of Rhenish-Westphalian brands have undergone no change, but I hear that the Luxembourg-Lorraine Puddle Pig combination does not want to sell any further for the third quarter at so frances per ton. In the rolling nilli branch the good demand has been kept up. Thick Sheets for vessels and boilers are in pressing request. Quite a business is further more transacting in thin Sheets, Merchant Iron, special ditto and drawn wire; most of the works are provided with orders for these goods for several months to come. But the greatest run of orders continues to be on the Bessemer Steel department. Many orders have to be filled for Iron Sieepers and all sorts of small Iron goods and hardware. Bolt makers have even raised their price list to \$\frac{2}{3}\$. An increase of work is noticeable among locomotive and car makers, alhough they are not vet engaged to the full extent of their capacity. The upper Italian railroads have latterly ordered in Germany 3; locomotives, of which J. A. Maffei, Munich, furnished 4, Heaschel & Son, Castel, 17, the "Vuican" Co., of Stettin, 11. The steam boiler shops and Rhenish shipyards are very busy; this together with orders from the marine shipyards insures our rolling mills heaps of commands. Furthermore, it should be mentioned that work increases at the foundries and machine stops, because at the last hour a variety of industrial branches discover that they cannot delay repairs any longer, and many have to procure a fresh outfit altogether. I quote to-day Dortmund Puddle Pig, 69 @ 70 marks; No. 1 Foundry, 77; No. 2, 72; No. 3, 97; Prime Spiegel, 8 @ 85; Dortmund Bessemmer Pig, 74 @ 76; Rod Iron, 140; Beams and Corners, 170; Prime Spiegel, 8 @ 85; Dortmund Bessemmer Pig, 74, 20; ditto Sheets, 120; No. 2, 17; Frime Sheets, 220; No. 2 ditto, 220; thin ditto, 210 @ 125; Rolled Wire, 100; All per ton at the works Coal—Is unaltered and moderately active. Metals.—A moderate amount of activity prevails, but prices are uphe

#### HOLLAND. (Koch & Vlierbe

(Koch & Vlierboom.)

ROTTERDAM, Jan. 24. 1882.—Tin.—Dealings during the week have been large at a guilders advance, but sance yesteriay the market has flattened, so that Banca has been obtainable at 68.55 guilders and Billiton at 68.50. Lead.—For "Stolberg" 9 as guilders \$\frac{9}{2}\$ sck g. is now asked. Of "Emserhutte" a lot changed hands at 8.37%, and at the same figure 10 tons Pirath and Young's brand were taken. Jan. 26.—Since the above was written both Banca and Billiton have dropped to 67.50, at which figure some business has resulted. Speculators for a rise have made great efforts to prevent the break we are now witnessing, but they have failed, and there is now every likelihood that the downward tendency will henceforward become more and more deckled.

#### EAST INDIES.

(Schmidt, Kustermann & Co.) (Schmidt. Kustermann & Co.)
FENANG. Dec 21, 1851.—Tin.—Since our respects dated 7th instant, the market opened at \$12.00, then receded to \$12.75, but soon recovered to \$44.05 per picul in response to highly favorable advices from Europe. The increased demand was, however, of but short duration, and then dropped again to \$13.60. Receipts during the fortnight have been 9000 piculs, and sales to Europe are as much, while in the way of ressles 8000 piculs changed hands with Chinese. The stock in bazar is at present 1500 piculs. Ezchange has been sustained in spite of the decline in silver. We quote 4 months' bank 3/9%.

#### IRON RAILS.

STEEL RAILS.

THE SPRINGFIELD IRON COMPANY

are open for orders for IRON AND STEEL RAILS for prompt delivery.

Apply to the Company at Springfield, Illinois

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In the Bessemer Converter, Crucible, Siemens Martin, Puddling, Blast and Cupola Furnaces. The use of this Process improves the quality of the product, saves fuel and labor, and does not re-quire any change in furnace or manner of working-See page 17 of The Iron Age of Oct. 25th, 1877.

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				-	_	-		_	-		_	-	-	-	-		_	-	-	-		-	_	-					
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	Combined Carbon																												
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Amount of pure metallic iron found...... 92.540



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Thorne, De Baven & Co., Philadelphia, Wiley & Russell Mfg. Co., Greenfield, Mass.

Leyle & Co., Richmond, Ind.

Eave Gutters.

Eckel & Co., Richmond, Ind.

Eave Trough Hangers.

Heartley & Demsey, Toledo, Ohio.

Rdge Tools, Makers of.

Doscher M. & Chambers, N. Y.

Egg Heaters.

Standard Manufacturing Co., Boston, Mass. Vale Lock Mfg. Co., of Chambers, N. Y .. Enve Trough Hangers.
Heartley & Demsey, Toledo, Ohio.

32 Rdge Tools. Wakers of.
Doscher M. Sc Chambers. N. Y.
33 Rgg Hearters.
Standard Manufacturing Co., Boston, Mass.
Stevens Rev. Milledolphia, Ps.
40 Crase Bros. Mig. Co., Chicago, III.
41 Granville Hydraulic Elevator Co., 1193 B'way. N. Y.
850kes & Farrish. Philadelphia.
42 Granville Hydraulic Elevator Co., 1193 B'way. N. Y.
850kes & Farrish. Philadelphia.
43 Granville Hydraulic Elevator Co., 1193 B'way. N. Y.
850kes & Farrish. Philadelphia.
45 Enert Finchet Wakeris.
46 Lehich Valley Emery Wheel Co., Welssport, Pa.
47 Mappet Emer J. H. Liberty, N. Y.
48 Magnineers' Mupplies.
Bowers W. H. H., Salt Lake City, Utah.
47 Rogers J. F. & Co., 107 Liberty, N. Y.
48 Rugineers' Mupplies.
Bowers W. H. H., Salt Lake City, Utah.
47 Rogers J. F. & Co., 107 Liberty, N. Y.
48 Rugineers' Schumm & Co., Philadelphia.
48 Englues Leecomotivel.
49 Baldwin Locomotive Works. Philadelphia, Pa.
40 Cox & Sons, Philadelphia, Pa.
41 Hartford En. W. & Co., Philadelphia, Pa.
42 Cox & Sons, Philadelphia, Pa.
43 Southwark Foundry & Machine Co., Philadelphia.
44 The Norwalk Iron Works Co., S. Norwalk, Conn.
45 Hartford En. W. & Co., Challedophia, Philadelphia.
46 The Norwalk Iron Works Co., S. Norwalk, Conn.
47 The Southwark Foundry & Machine Co., Philadelphia.
48 Southwark Foundry & Machine Co., Philadelphia.
49 Southwark Foundry & Machine Co., Philadelphia.
41 The Norwalk Iron Works Co., So. Norwalk, Conn.
40 Twiss Nolson W., New Haven, Conn.
41 Engrusers.
42 Crosseup & West.
43 Rogers J. W. & Co., Chester, Pa.
44 Engrusers.
45 Pacings. Foundry.
46 Co., Chester, Pa.
47 Engray.
48 Co., Chester, Pa.
48 Engrusers.
48 Co., Chester, Pa.
49 Paucets, Milbrook, N. Y.
50 Faucets, Milbrook, N. Y.
51 Enering. & Fencing, &c.
Cleveland Wrought Iron Fence Wks., Clevelan
Files, Importers ot.
Files, Importers ot.
Files, Introd & Co. 93 Chambers, N. Y.
Carr J. & Rilev & Gold, N. Y.
Files, Manufacturers of.
Auburn File Works, 85 Chambers, N. Y.
Barnett G. & H., 41 and 43 Richmond, Phila.
Evenhart James M., 86 Beekman, N. Y.
Disston Henry & Sons, Phila.
Everhart James M., Scranton, Pa.
Fenssier Christian, Philadelphia, Pa.
Johnson & Bro., 1 Commercial, Newark, N. J.
McCaffrey & Bro., 172 and 1734 N. 4th. Phila.
New American File Co., Pawtucket, R. I.
Nicholson File Co., Providence, R. I.
Northwestern File Co.
Faul Chaz, H., Williamsburgh, N. Y.
Spencor John & Son, Shemid, England.
Theres.
Unon Bie Works, Baltimore, Md.
Filters.
Lewett Mon. C. & Sons, Buffalo, N. Y.
Lewett Mon. C. & Sons, Buffalo, N. Y. Spiencer John & Son, Sheffield, England,
The J. Barton Smith Co., Philadelphia, Pa.
Union File Works. Baltimore. Md.
Filters.
Jewett John C. & Sons. Buffalo, N. Y.
Fire Brick. Makers of.
Borgner & O'Brion, Philadelphia, Pa.
Colson Chas. D., Chicago, III.
Garaner Brothers, Pittsburgh, Pa.
Hall & Sons, Buffalo, N. Y.
Kreisener B. & Sons, front of E. Houston St.,
Maurer Henry, 415 East rad, N. Y.
Newton & Co., Albany, N. Y.
Union Mining Co., Philadelphia, Pa.
Valentine M. D. & Bro, Woodbridge, N. J.
Watson Fire Brick Co., Perth Amboy, N. J.
Fishins Tackel.
Malleson, Fred'k. Brooklyn, E. D., N. Y.
Mann John H. & Co., Syracuse, N. Y.
Filint and Emery Paper and Cleits,
Baeder, Adamson & Co., 79 Market, Phila.
Forgees. Pertable, &cc.
Buffalo Forge Co., Buffalo, N. Y.
Forge Company, Brooklyn, E. D., N. Y.
Holl Mig. Co., Cleveland, O.
Kevatone Fortable Force Co., 118 Carter, Phil.
Forgings, Iron and Cliff, N. Y.
Holl Mig. Co., Cleveland, O.
Kevatone Fortable Force Co., 118 Carter, Phil.
Forgings, Iron and Cliff, N. Y.
Holl Mig. Co., Cleveland, O.
Hosse Win, & Brook Lyn, E. D., N. Y.
Furnances, Makers of,
Richmond & Potts, 170 S. th. Phila, Pa.
Furnance Charging \*\*Conic Bernal Boilers.
Upton A. F., Boston, Mass.
Furnance Holsies.
Stokes & Parriab. Philadelphia, Pa.
Carv & Moen, 24 W. 29th, N. Y.
Carven Tools. McDonald H. Pittsburgs, Pa.
Furniture Springs.
Carv & Moen. 231 W. 39th. N. Y.
Gurden Tuols.
Dunian C. John, 42 Chambers, N. Y.
Dunian C. John, 42 Chambers, N. Y.
Dunian C. John, Mig. Co., Millers Falls, Mass
Grantie I ron Ware.
St. Louis Stamping Co., St. Louis, Mo.
Grate Bars. St. Louis Stamping Grate Bars. Groswell David S., Philadelphia. Pa. Grate Hars.
Creawell David S., Philadelphia, Pa.
Grindstones.
Atlantic Stone Co., Boston, Mass.
Lombard & Co., Boston, Mass.
Lombard & Co., Boston, Mass.
McDermont a Berea Stone Co., Cleveland, O.
Ohio Grindstone Co., Cleveland, O.
Wood Walter R., 28, and 28, Front, N. Y.
Gunsowder, Makers of.
Laffic & Hand Powder Co., 29 Murray, N. Y.
Haudles, Spokes, &c.
Hundley & Hanks, 79 Reade, N. Y.
Hangers, Harn Door,
Medina Mrg. Co., Medina, N. Y.
Moore S. H. & E. Y., Chicago, Ill.
Terry Mrg. Co., Dundee, N. Y.
Hardware Commission Merchauts.
Brower & Leeds, St. Murray, N. Y.
Field Alfred & Co., oz Chambers, N. Y.
Haydock, Robt, R. & Co., 73 Murray, N. Y.
Heaton & Denckla Hdw. Co., 907 Commerce, I
Siedel J., Habana, Cuba.
Hardware Deneira. Sneuard Sidney & Co., Buffalo N. Y.
Witte Francis T., II Chambers, N. Y.
Hardware Importers.
Boker Hermann & Co., 101 Duane, N. Y.
Field Alfred & Co., 03 Chambers, N. Y.
McCoy & Sanders, 122 Duane, N. Y.
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Enterprise Mfg. Co., Phila. Hardware hamfacturers.

Bardware hamfacturers.

Bardwa Hay Knives.
Holt Hiram & Co., East Wilton, Me....
Heater and Purifier, Feed Water,
Lowe & Watson, Bridgeport, Conn.... Hinges. Stanley Works, New Britain, Conn. Staniey Works, New Drivana,
Hors.
Bruce George W., I Platt, Y Y.
Hog Ringers.
Chambers, Bering & Quinian, Decatur, III.,
Hill H. W. & Co., Decatur, III.,
Holsting Knajines, Makers of,
Crane Bros., Mig. Co., Chicago, III.,
Frisbie D. & Co., Philadelphia, Pa.
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Dunn J., Cieveland, O.,

Harrington Edwin & Son. Philadelphia, Pa.,

Moore, S. H. & E. Y. Chicago.

Sellers Wm. & Co., Phila and 79 Liberty st., N. Y.,

Stokes & Parrish, Philada. Pa.,

Yale Look Co., 3 Chambers, N. Y.

Hooks (Cotton & Bale.) New York Handle & Mallet Works, 456 E. Houston...

Horse Clippers. Boker Hermans & Co., 101 & 103 Duane, N. Y...32&37

Horse Hay Forks. Waldron John, Muney, Pa.

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Easex Horse Nail Co., Toy, N. Y.
FP Nail Co., Cleveland, O.
National Horse Nail Co., Vergennes, Vt.
Saranac Horse Nail Co., Plattsburg, N. Y.
Horse Shoes, Makers of,
Combination Iron Clad Steel Horse Shoe Co., Boston, Mass. Combination Iron Clad Steel Horse Show Con, Mass. Keyatone Horse Shoe Co., Philadelphia, Pa. Rhode Island Horse Shoe Co., Providence, R. I., Schoenberger & Co., Pittaburgh, Pa. The Burden Iron Co., Troy, N. Y. Hot Blast Stoves.

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Hydrants, &c.

McLean John, 300 Monroe, N. Y.

Mchan John, 300 Monroe, N. Y.

Mohawk & Hudson Mfg. Co., Waterford, N. Y.

Mydraulie Jacks.

Dudgeon Richard, 24 Columbia, N. Y.

Lyon E. & Co., 4708 Grand, N. Y.

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White Mountain Freezer Co., Laconia, N. H., Ice Creepers.
E. T. Barnum' Detroit, Mich....
Scott R. P. & Co., Newark, N. J..
Ice Tongs.
Reed & Co., Higganum, Conn... Injectors.
Jenks James. Detroit, Mich.
Insurance, Boiler.
Hartford Steam Boller Inspection & Insuran
Fron. (Manufacturers' Agents.)
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Hoffman J. W. & Co., 26 S. 4th. Phils.
Levis Henry & Co., Philadelphila, Pa.
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Iron. Manufacturers' Levis Henry & Co., Philadelphia, Pa.
Lundell Chas. G. (Swedish), Boston, Mass.

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Burden Iron Company, Troy, N. Y.
Burden Iron Company, Troy, N. Fitsburgh, Pa.
Elba Iron and Bolt Co., Imited, Pitsburgh, Pa.
Keystone Rolling Mill Co., Lettsburgh, Pa.
Keystone Rolling Mill, Limited, Pitsburgh, Pa.
Keystone Rolling Mill, Limited, Pitsburgh, Pa.
Keystone Rolling Mill, Limited, Orhicaso, Ill.
Fornation Co., 410 Walnut, Philadelphia
Rowland John. 460 West St., N. Y.
Montour Iron & Steel Co., Danville, Pa.
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Phoenix Iron Co., 410 Walnut, Philadelphia
Rome Iron Co., Chattanooga, Tenn.
Rome Merchant Iron Mills, Rome, N. Y.
Rowland James & Co., 220 N. Delaware ave., Phila
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Rowland James & Co., Aroh, Philadelphia
Zug & Co., Pittsburgh, Pa.
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Etting Edward J., Philadelphia, Pa. Blakey & Walbaum, Philadelphia, Pa
Boynton Gea, A., 70 Wall, N. Y.
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Boynton Gea, A., 70 Wall, N. Y.
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Fox & Drummond, 64 Wall, N. Y.
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Abeel Brothers, 105 South N. Youth, Philadelphia. Herrashelm L., tes John, N. Y.
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Cooney Daniel F., 38 Washington. N. Y.

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Harrison & Gillicon. 54 to 532 Water. N. Y.

Hoffman J. W. & Co., 26 S. Fourth, Philadelphia.

Hubbard Chass., 46 Cliff. N. Y.

Liseberger B. A., 39 E. 10th. N. Y.

Lundberg Gustaf. & Killy, Boston. Mass.

Lundell Chas., 46 Cl., Philadelphia, Pa.

Liseberger B. A., 59 E. 10th. N. Y.

Lundberg Gustaf. & Killy, Boston. Mass.

Lundell Chas. G. (Swedish), Boston. Mass.

Lundell Chas. G. (Swedish), Boston. Mass.

Lundell Chas. G., 57 John. N. Y.

Naylor & Co., 29 John. N. Y.

Naylor & Co., 29 John. N. Y.

Naylor & Co., 29 John. N. Y.

General Reliance S. William. N. Y.

Herson & Co., 28 Broadway. N. Y.

Ferson & Co., 28 Broadway. N. Y.

Guincy John St. W. William. N. T.

Guincy John E. & Bros. Ld. Glasgow & Middlesbro'. S.

Wallsce Wm. H. & Co., Albany and Washington Streets. N. Y.

Wilson E. H. & Co., Philadelphia, Pa.

Lise L. & Co., Philadelphia, Pa.

Wilson E. H. & Co., Philadelphia, Pa.

Whitney A. R. & Co., & Mangandon. England... 35

Bichards D. W. & Co., 29 Mangandon. England... 35

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Bichards D. W. & Co., 20 Mangandon. England... 35

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Wilson E. H. & Co., Philadelphia, Pa.

Wilson E. H. & Co., Philadelphia, Pa.

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Wilson E. H. & Co., Co. Mich.

Howard & Horse, 45 Fulton, N. Y.

Jacks.

Conway, T. G., & Chambers. N. Y.

Ohl Geo. A. & Co., East Newark, N. J.

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Illiand Few and Bolt Co., Carpentersville, Ill.

Seeger Mrg. Co., Springfield, Mass.

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Frentzei J. F., Philadelphia, Pa.

Howard & Morse, 45 Fulton, N. Y.

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Lloy J., Supplee & Walton, Philadelphia, Pa.

Mast, Foos & Co., Springfield, Ohlo.

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U. S. Smelting Works, Philadelphia, Pa.

Lemon Neuczer.

Lemon Neuczer.

Murray, N. Y. U. S. Smelting Works, Philadelp Lemon Squeezera. Dean, Wm. B., 43 Murray, N. Y.. Onderdonk B., 405 Grand, N. Y. Ripley Mfg. Co., Unionville, Ct Ripley Mrg. Co., Unional Mrg. Ripley Mrg. Co., Unional Mrg. Co., Unional Mrg. Disston Henry & Sons. Philadelphia.

Disston Henry & Sons. Philadelphia.

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Mack Hoery
Mack Holder
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Milliams 167 Plymouth, Brooklyn
Box Alfred & Co., 12 Green, Phila
Lodge & Blake, Newark, N. J.
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L. B. Flanders Machine Works, Philadelphia, Pa.
Monawk & Hadson Mfg. Co., Waterford, N. Y.
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Pittsburgh Mrg. Co., Pittsburgh, Fa.
Furdy Machine Co., Cleveland, O.,
Bogers J. F. & Co., 107 Liberty, N. Y.
S. A. Woods Machine Co., 91 Liberty, N. Y.
S. A. Woods Machine Co., 91 Liberty st., N. Y.
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The Stiles & Farzer Fress Co., Middletown, Ct.
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Tork & Smith, Cirveland, O. Machinery (Barnes's Foot Powers)
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Harrington E. & Son, 15th St. and Pennsylvania ave., Philadelphia, Pa.
J. Gray Machinery Depot, 37 Dey, N. Y.
King J. M. & Co., Waterford, N. Y.
Rogers J. F. & Co., 10 Liberty, N. Y.
Sellers Wm. & Co., Phila adaphia, Pa.
Wright John H., Bridgeport, Conn.
Mallets. Mailets.
N. Y. Handle and Mallet Works, 446 E. Houston....13
Penfield Block Co., Lockport, N. Y.
Measuring Tapes.
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Elkins Mig, and Gas Co., Philadelphia, Pa.

Goldsmith Moses & Son, Charleston, S. C.

Merchant & Co., Philadelphia.

Naylor & Co., 29 John, N. Y.

Northrop A. C., Waterbury, Conn.

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Sawyer Em. Woroester, Mass.

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Mineral Wool.

U. S. Mineral Wool.

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Mineral Candless. Makers of,

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Molasses Gartes.

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Moldings Sand. Kimball Shovel Co., Baltimore, Md., Medding Nand.
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Faxson J. W. & Co., 1046 Beach, Philadelphia, Pa.,
Schenectady Molding Sand Co., Schenectady, N.Y.
Meuse Traps.
Whitehead Bros., 117 W. 15th. N. Y.
Jones Claudius & Co., Erle, Pa.
Ripley Mr. Co., Unioaville, Conn.
Smith & Egye Mrg. Co. Bridgeport, Conn.
Natis. Smith & Egye mis. Co. 130 Greenwich. N. Y.

Raije.
Fuller Bros. & Co., 130 Greenwich. N. Y.
Oxford Iron Co. 8: Washington, N. Y.
Rowland Jas. & Co., 220 N. Delaware, Ave., Phila.
Sohoenberger & Co., Pittsburgh, Pn.
Zug & Co., Pittsburgh, Pa.

Xail Machinery.
Pittsburgh Mg. Co., Pittsburgh, Pa. Pittaburch Mig. Co., Pittaburgh, Pa.

Nickel Pinters' supplies.

Hanson & Van Winkle, 92 Liberty, N. Y.

The Zucker & Levett Chemical Co., 450 to 44 West

ioth st., N. Y.

Enterprise Mig. Co., Philadelphia, Pa. Enterprise Mfg. Co. Philadelphia, Pa.

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Naylor & Co., og John. N. Y.
Rowland Wm. & Harvev. Frankford, Philadelphia.

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Atwood Safety Nut Co. Springheid, Mass.
Haskell W H. & Co. Pawtucket, R. I.
Haalett F. M. & Co. Allegheny, Pa.
stussell. Burdsall & Ward. Port Chester, N. Y.
Standard Nut Co., Pittsburgh, Pa.
Sternbergh J. H. Reading, Pa.

Oll Cups. Sternbergh J. H., Reading, ra.

Sternbergh J. H., Reading, ra.

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Detroit Lubricator Mrg. Co., Detroit, Mich.

Oil Stones.
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Ratzonsiein L. & Co., 3x Desbrosses, N. Y.
Paint.
Level Charles H. & Co., Philadelphia, Pa.
Level Charles H. & Co., Philadelphia, Pa.
Paint. Metallie,
New York Iron Hoofing and Paint Co., Cincinnati, Chio.
Parers. Apple and Petato.
Goodell Co., Antrim, N. H.
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Howson & Son. Phila. and Washington, D. C.
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Esterbrook Steel Fen Co., 25 John, N. Y.
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Harrington & Oglesby Co., Chicago, III. hosshor Bronze. Kaufman A., 36 Park Place, N. Y. Phosohor Bronze Smelting Co., Limited, 512 Arch, Philadelphia. Kaufmanu A., 36 Park Flace, N. T.
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Picks, Pittings, etc., Makers of,
McNeal & Harlin Mig. Co., 35 John. N. Y.
Pines, Fittings, etc., Makers of,
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McNeal A. H., Burlingson, N. J.
Mellert Foundry and Machine Co., Limited, Reing, Pa.
Roading from Works, Philadelphia, Ps.
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Wyckoff A., Elmira, N. Y.
Plane Irons, Manufacturers of,
Buok Bros., Milbury, Mass.,
Globe Mig. Co., Middletown, Conn.
Planes, Manufacturers of,
Stanley Rule and Level Co., 30 Chambers, N. Y.
Planted Ware.
Hall, Elion & Co., 31 Chambers, N. Y.
Planted Ware.
Hall, Elion & Co., 31 Chambers, N. Y.
Proverbet, Mass., Manufacturers of,
Proverbet, Mass., Manufacturers of,
Booker Hermann & Co., 10 Duane, N. Y.
Pots and Kertles. Ten and Coffee,
Empire State Mig. Co., Buffalo, N. Y.
Power in mmers.
Dienelt & Eisenhardt, Philadelphia, Pa.,
Presses, Power, Makers of,
Beccher & Peck, Now Haven, C.
Bilss E. W., 167 Plymouth, Brooklyn.
Marriman A. H., West, Meriden, Conn.
Misgara Stampling and Tool Co., Buffalo, N. Y.
Peerless Funch & Shear Co., 115 W. Liberty N. Y.
The Stiles & Parker Press Co., Middletown, Ct.
Printers.
Gie & Co. Printers.
Gies & Co...
Printing Presses.
Kelsey & Co., Meriden, Conn.. Kelsey & Co., Meriden. Conn.
Pallevs.
Hartford Engineering Co., Hartford, Conn.
Fennield Block Co., Lockport, N. Y.
Providence Tool Co., Providence. B. I.
Pumps. Makers of,
Douglas W. & B., Middletown. Conn.
Mercer B. F., Alliance. O.
Rumsey L. M. & Co., St. Louis, Mo.
Union Mg. Co., & Chambers. N. Y.
Youngstown Measuring Fump Co., Youngsto Youngstown Measuring Pump Co., Youngstown Halis. Iron and Steel. Nakers of.
Allentown Rolling Mill. Co., Allentown, Pa.
Carnegie Bron. & Co., United, Pittsburgh, Pa.
Cleveland Rolling Mill. Co. Cleveland, Ohio...
Despard Brothers, 60 Wall, N. Y.
Godeffroy & Co. 43 New, N. Y.
Hernsneim L. 165 John, N. Y.
Jollet Steel Co., Chalcago, Ill.
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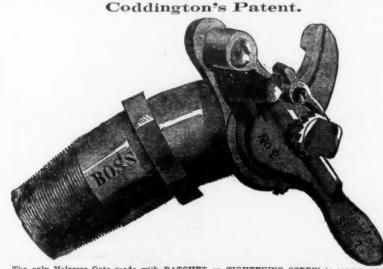
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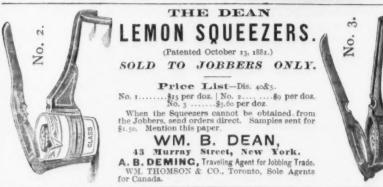
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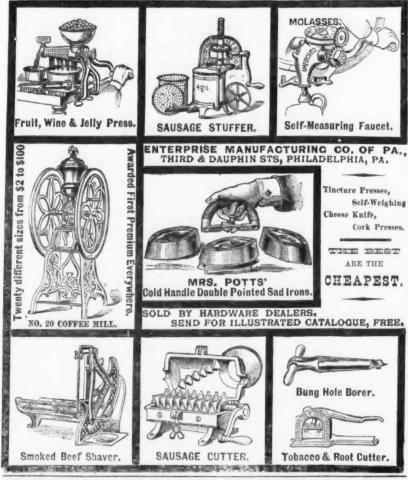
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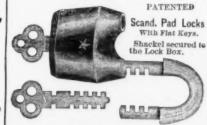
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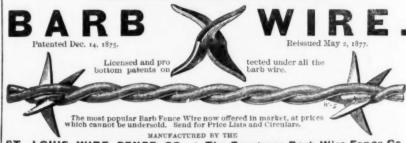
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ouble Cut Gimlet Bits, Ives"	Sargent & Co.'s
Awi Hafts.	######################################
owing, Brass Ferrule \$3 \times \$7 gross—dis 40 \$25 \$5 atent Sewing, Short 41.ce \$60=dis 40 \$25 \$5 atent Sewing, Long \$4.50 \$60=met stemt Feg. Fish 70p \$10.00 \$gross—dis 40 \$10 \$5 atent Feg. Fish 70p \$10.00 \$gross—dis 40 \$10 \$5 atent Feg. Leather 70p \$10.00 \$gross—dis 40 \$10 \$5 atent Feg. Leather 70p \$10.00 \$gross—dis 40 \$10 \$5 atent \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10 \$10	\$16.00 19.00 21.40 24.00 27.00 30.00 33
atent Peg, Leather Top\$12.00 # gross—dis 40&10 % Awls, Brad Sets, &c.	Can Openers.
Awls, Brad Sets, &ce.  wis, Sewing, Common.   \$\psi\$ gross \$1.70-\text{dis \$2\text{kip 5}\$ to \$5\$ to	Duplex
wis, Shouldered Brad# gross \$2,70—dis 25&10 \$ wis, Handled Brad\$7.40 \(\pi\) gross—dis 25&10 \(\frac{5}{2}\) wis. Handled Scratch\(\frac{5}{2}\),00 \(\pi\) gross—dis 25&10 \(\frac{5}{2}\)	Duplex
vis, Socket Scratch \$1.03 @ \$1.25 \( \text{dos} \) dos not ad Sets, Aiken's \( \text{W} \) dos \$12.00 \( \text{dis 45&10 } \) ad Sets, No. 42. \$10.50; No. 43, \$12.50 \(	Star
nd Sets, Stanley's Excelsior, No. 1, \$0,50dis 30&10 \$ ad Sets, Stanley's Excelsior, No. 2, \$4,80dis 30&10 \$ ad Sots, Stanley's Excelsior, No. 3, \$7,80dis 30&10 \$	"Worlds Best" # gross, No. 1. \$12; No. 3. \$35. Universal
A xes. ngle Bit, 414 to 514 and under	Caps — Percussien № 1000. U. M. C. F. C. trimmed
Axes.  agie Bit, 4½ to 04 and under \$\psi\$ dos \$10.00 net ngie Bit, 4½ to 0 and over \$\psi\$ dos \$10.00 net ngie Bit, beveled \$\psi\$ of \$\psi\$ dos advance unbie Bit, 4½ to 5½ and under \$\psi\$ dos \$16.00 net nubie Bit, 4½ to 5½ and over \$\psi\$ dos \$36.00 net nubie Bit, 4½ to 5 and over \$\psi\$ dos \$4.00 \$\psi\$ dos advance unbie Bit, beveled \$\psi\$ to \$\psi\$ dos advance	U. M. C., Cen. fire ground
uble Bit, 4% to c and over	Double Waterproof, in 1-10's
agor's	E. B. 1-10, trimmed
andard list	Cartridges.—Rim
Axie Grease.  agor's.  Axie and dist.  and dist.  by 5 6c  Axies.  By Bos 6c  Axies.	Cards.—Horse and Curry. new list. July Cotton
lelis. nd, Light Brassdis 65 %	Carpet Stretchers. Cast Steel, Polished
nd, Extra Heavy dis 45 % and White Metal dis 65 % and Silver Chime dis 20\$10 \$	Bullard's
und, Globe (Cone's Patent). dis 252 to \$ ng, Abbe's. dis 202 to \$ ng, Yankee dis 302 to \$	Plate and Shallow Socket
ng, Barton's. dis 305.10 % nk, Taylor's. dis 258.10 % nk, Brooks' dis 305.10 %	Cattle Leaders. Humaon, Beckley & Co.'s. Sargent's.
nk. Cone's dis 10 \$ nk. Connel's dis 35 \$ er, Sargent's dis 55%25	Chain. Trace, 64-10-3. P pair
er, Taylor's Bronzed or Plated	Trace, 7-10-2. P pair German Halter Chain, list of Dec. 31, 1881
er, Reading	Covert Haiter, Hitching and Breast
, Common Wrought	Challs. Trace, 6½-10-3.  P pair Trace, 6½-10-3.  P pair Trace, 7-10-3.  German Hafter Chain, list of Dec. 31, 1881. German Coll, list of Dec. 31, 1881. German Hafter Chain, list of Dec. 31, 1881. German List of Dec.
Spring Balances	Chalk. White Red. Blue. White Crayons. Wg
Dodge's Genuine Kentucky, new list—	White Crayons
Texas "Star"dis 40 %	Chisels. Socket Framing, Crossman Socket Framing, Arlington Edge Tool Co. Socket Framing, Buck Bros. Socket Framing, Buck Bros. Socket Framing, Merrill. Socket Framing, Douglass' Socket Framing, Douglass' Socket Firmers, Crossman Socket Firmers, Edge Tool Co. Socket Firmers, Buck Bros. Socket Corner Fanged Firmers, Butcher's. Tanged Firmers, Butcher's. Tanged Firmers, Butcher's. Tanged Firmers, Buck Bros (Shank). Clamps.
esmitha", Common	Socket Framing, Merrill. Socket Framing, Witherby Tool Co
Jery dis 25 % de Bellows dis 25 % elting, Hubber. Belting and Packing Co. dis 20% 50 %	Socket Firmers, Crossman. Socket Firmers, Arlington Edge Tool Co
it Holders.	Socket Firmers, Merrill. Socket Firmers, Witherby Tool Co.
t Holders.  naion, Barber's.  # doz \$15.00—dis go\$5, \$ naion, Ives.  # doz \$15.00—dis go\$ onal.  # dos \$24.00—dis go\$ liar.  # dos \$24.00—dis go\$	Socket Corner. Fanged Firmers.
lind Adjusters.—Domestic. V doz \$1.00—dis 15 % claior	Tanged Firmers, Butcher's\$5.00 Tanged Firmers, Spear & Jackson's Tanged Firmers, Buck Bros (Shank)
lind Fasteners. kroll's	Clamps, fron, Providence Tool Co.'s Wrt. Iron fron, Adjustable, Gray's iron, Adjustable, Lambert's fron, Adjustable, Bow's fron, Adjustable, Bow's fron, Adjustable, Blearns' fron, Adjustable, Blearns' fron, Cabriett, Sargent's fron, Carriage Makors', Sargent's
ind Fasieners.  Fred's. F dog pairs, \$1.00, dis 10 % krell's.  Sand's, Screw pattern F gro., \$10.00, dis 15 % Sand's, old pattern F gro., \$10.00 dis 15 % sone's hours Patent F gro., \$10.50 net intan's.  new list net krell's. F dos pairs, \$0.65, dis 10 % krell's.	Iron, Adjustable, Lambert's. Iron, Adjustable, Snow's. Iron, Adjustable, Hammer's.
krell's	Iron, Adjustable, Stearns' Iron, Cabinet, Sargent's Iron, Carriage Makers', Sargent's
	Clips, Axle. Norway or Best. Superior.
bed, \$10.  jocks, New list Jan. 5, 1882.  field Block Co., Rope and Iron Strap'd. dis 35 \$  field Block Co., Wrot. Iron Com. bushed. dis 35 \$  field Block Co., Wrot. Iron, all steel roll? dis 25 \$  field Block Co., Lig. and Iron Sheaves. dis 35 \$  loy Ruis and Level Co.'s. dis 36 \$  dis 40\$10 \$	Coal Hods. Grinths'. Cockeyes.
deld Block Co., Lig. and Iron Sheavesdis 35 % ley Ruis and Level Co. s	Cockeyes
Iron Barrel, Shutter, &cdis 50&10 % Iron Chain (Sargent's list)dis 50&10 %	Cocks, Hrass. Racking, new list. July 10, 1880. Globe, new list, July 10, 1890. Flain Hibbs, new list, July 10, 1893. Ale and Beer, new list, July 10, 1893.
rat. Door Boits	Collee Mills.
ught Shutter, all Iron, Stanley's listdis 50&10 % ught Shutter, Brass Knob, Stanley's list.dis 50&10 % ught Shutter, Sargent's list	Selsor's Pat
ught Sunk Flush, Sargent'sdis 65&10&10 % ught Sunk Flush, Stanley'sdis 40&10 % ught B. K. Flush, Com'n, Stanley'sdis 55&214 %	American Enterprise and Co.). French Steel. The "Swift" (Lane Bros.). Webb's Patent Combined Dinner Pail and Lanters
rage and Tire, Common	Combined Dinner Pail and Lanters
on Carriage (old list)	Compasses, Dividers, &c. Compasses, Dividers, &c. Compasses, Calipers, Dividers
mloy Ruis and Level Co.'s dis sokio 5 oltes.  oltes.  tron Barrel, Shutter, &c dis sokio 5 t ron Chain (Sargent's list). dis 50 & 10 5 t ron Chain (Sargent's list). dis 50 & 10 5 t ron Chain (Sargent's list). dis 50 & 10 & 10 & 10 & 10 & 10 & 10 & 10 &	Calipers. Dividers. Bemis & Call Co.'s Dividers. Bemis & Call Co.'s Compasses and Califpers. Bemis & Call Co.'s Compasses and Califpers. Bemis & Call Co.'s Wiog & Inside or outside. Bemis & Call Co.'s Double Bemis & Call Co.'s Call's Patent Inside). Kuller's Patent. Hiller's Patent.
re, H. B. & W	Bemis & Call Co.'s Wing & inside or outside. Bemis & Call Co.'s Double Bemis & Call Co.'s (Call's Patent Inside)
W R. B. & W. dis 40 % hine dis 60 % li	Excelsior. Miller's Patent. Coopers' Tools.
100 W = 000 F	Corkscrews.—Humason & Beckly Mfg. Co
lips, with Ausers 7.00 7.50net	Corn Knives and Cutters.—Bradley's
rchangeable Shelf Boxesdis 20 %	Vadsworth's Crow Bars
races.  Backus	Curling Irons, &c.
Backus	Carling Irons, &c., 6, %, % in, \$1.80, 2.00, 2.40 urling Tongs & doz \$3. Inching Irons & doz \$7.
mon Ball (American). dis 50 % p don's dis 50 % p	
ire dis 40 % E dis 30 % L dis 40 % L	Curry Common.  fich's, new list. iotchkiss, Novelty, new list, July, 1880. lotchkiss, Excir. Supr. Champion.  awrence 'Perfect' ubber.   \$\psi\$ dos \$10.5\$
	Curtain Pins.
rackets. (, plain dis 50kro \$ (, fancy dis 50kro \$ 8	HYDROG GHADE
plain dis 50&10 \$   fancy dis 55&20 \$   8	Ontlery.
, plain dis 50&10 \$ 8, ting dis 55&20 \$ 8, ting dis 55&20 \$ W	Vhite Enamel

YORK Wholes	Si
Butts.  Wronght Brass	200
Fast Joint, Narrow	
Loose Fil, With dis 4842.  Loose Fil, Light dis 4842.  Spring Hinges dis 26 Look Butts dis 26 Cecr's Spring Hinges dis 26 Look Butts dis 27 Look Butts dis 27 Look Butts dis 27 Look Butts dis 26 Look Butts dis 2	K KKKKKKK
Blind Butts, Nicholson dis 42&20 Blind Butts, Huffer dis 50 Blind Butts, Huffer Nos. 1, 3, 5, 40, 45 and 40, dis 70 Blind Butts, Sargent's, Nos. 1, 3, 5, 40, 45 and 40, dis 70 Blind Butts, Sargent's, No 1, 3 dis 70 Blind Butts, Reading a Gravity dis 654&2 Clark's Improved Shutter Hinge, Nos. 0, 1, 196, 2,	A KKKKKK
How Pins.   dis 25	ANN NAN
\$16.0 19.00 21.90 24.00 27.00 30.00 33.50 36.50  Can Upenera.  Messeuger's Comet.  P dos, \$3.00, dls 25. American.  P dos \$7.00, dls 7.50  Duplocut.  P dos \$7.00, dls 7.50  Lyman's.  P dos \$3.70, dls 3.50  Eurek.  P dos \$3.70, dls 3.50  Eurek.  P dos \$3.70, dls 3.50  Eurek.  P dos \$5.00, dls 3.50  Eurek.  P dos \$5.00, dls 3.50  Eurek.  P dos \$5.00, dls 3.50  Lyman's.  P dos \$5.00, dls 3.50  Lyman's.  P dos \$5.00, dls 3.50  Lista', No. 2, \$4.50  Lista', No. 3, \$4.50  Li	M M M REHS
U. M. C., F. O. trimmed. 900 dis rokto 9 U. M. C., Cen. fire ground 700 dis rokto 9 U. M. C., Double W. Proof. \$1.00 G. D. & S. B. 330, dis 59 Double W. Materproof, in 1-10 \$1.00 dis 40.0 dis 50	B
Cotra Pistol, in 1.10% 500  E. R. 1-10, trimmed 500  E. R. 1-10, ground edge 500  Musket, in 1-10's 500  Musket, in 1-10's 500  Cartrilliges.—Rim. 61s 20810  Contral Fire. 61s 20810  Corres.—Horse and Curry new list, July 81, dis 10 8  Ootton. 100  Cotton. 100  Cot	Co
Casters	At R. J. J.
Challs.  Challs.  Trace, 6½-10-2  Trace, 6½-10-3  Trace, 0½-10-3  Trace, 0½-10-3  Trace, 0½-10-3  Trace, 0½-10-3  F pair 70c  dla 35 %  German Halter Chain, list of Dec. 31, 1881 dla 35 %  German Coll, list of Dec. 31, 1881 d	Fig. Mod H. Hee Nic Ne Un Kn Ea, Cro
Blue. P gross \$1.0 net White Crayons. P gross \$1.0 net White Crayons. P gross up net Chisels. Socket Framing, Crossman Socket Framing, Arlington Edge Tool Co. dis 55k to \$ Socket Framing, Buck Bros. 1876 list, dis 25k to \$ Socket Framing, Buck Bros. 1876 list, dis 25k to \$ Socket Framing, Witherby Tool Co. dis 56k to \$ Socket Framing, Douglass dis 55k to \$ Socket Framing, Cossman. dis 65k to \$ Socket Framing, Cossman.	Ea Cre Cre An Do Ge Cre She She
White Crayons.	Par Par Par Par Pia Pia
Clamps.  (ron, Providence Tool Co.'s Wrt. Iron. dis 25 % Iron, Adjustable, Gray's dis 20 % Iron, Adjustable, Lambert's dis 20 % Iron, Adjustable, Lambert's dis 20 % Iron, Adjustable, Bamuer's dis 15 % Iron, Adjustable, Hamnier's dis 15 % Iron, Adjustable, Hamnier's dis 20 % 15 % Iron, Cabinet, Sargent's dis 20 % 15 % Iron, Carriage Makers', Sargent's dis 60 % 15 % Clips. A xle.  Norway or Best dis 40 % 5 % Superior dis 9 % 5 % Superior dis 9 % 5 % Superior dis 9 % 5 %	Ent Am No. P d
Cont Hods. Orimths' dis 33% 5 Cockeyes dis 35% 0 \$ Cocks, Brass dis 35% 0 \$ Cocks, Brass dis 40 \$ 3lobe, new list, July 10, 1880 dis 40 \$ 7lan Hibbs, new list, July 10, 1880 dis 40 \$ 7lan Hibbs, new list, July 10, 1883 dis 40 \$	Will Will Will Will Will Will Will Will
Ale and Beer, new list, July 10, 1890   dis 40 \$	Grin: Fan Fan Sar; Res U. M
241pers	U. A. D. M. D. M. Cov. Hor
Corkscrews.—Humason & Beckly Mfg. Co.dia 305 % flough's Wire. 3 % dis 25 % Corn K nives and Cutters.—Bradley'sdis 10 % vadworth'sdis 25 % adworth'sdis 25 % dis 25 %	Har Hur Ver Mag War Kip Yer Will Prov Prov
Curry Combs.  tich's, new list.  dis 55 fotchins, Novelty, new list, July, 1880. dis 25 fotchins, Novelty, new list, July, 1880. dis 25 fotchins, Exclr. Supr. Champion. dis 25 fotchins, Exclr. Supr. Champion. dis 25 fotchins, Currain Pins.  currain Pins.  turered Glass. net	H No Pe Rog Brot Jap' Bo Barr Wro Surf
eriden Cutlery Co. (Table). net m. Miller Bro.'s Cutlery Co. dia 25 \$ umason & Beckley. Pocket dia 21 \$	Flus Lifti Saw Boyn Boyn

IUIU	Salt Filles, F	culually 10, 10
dls 6ckr	Deg Collars.  Embossed Git dis 2  Eather dis 3  Bras dis 4  Celluidi dis 4	Hickory Firmer Chisel, assorted. # gross. \$4.50 Hickory Firmer Chisel, large, # gross \$co Apple Firmer Chisel, assorted, # gross \$co
dis 30 dis 20 dis 20 dis 20 dis 40 di	O Door Marines.	Api le Firmer Chisel, large, P gross 5.00 d Socket Firmer Chisel, assorted, P gross. 3.00 20 Socket Framing 'hisel, assorted, P gross. 5.00 6 File, assorted, P gross. 2.75 326
dis 50&10	Gray's Roddis i	Mickory Firmer Chisel, assorted, # gross.\$4.50     Bickory Firmer Chisel, large, # gross
dis so&redis sowredis sowredi	Gem (Coil)   No. 1, Large, Japanned	Patent Auger, Swan's
dis 45&10 dis 55&10 Tipsdis 55&10	Star (Coll)   For Cop'd, Nickel-Plated, &c., see list. No. 4("Shoo Fly") Screen door size, F doz \$1.50   No. 5, Screen Door Size. P doz 2.00   dis	Challenge
dis 40&10	Sabin's LeverNo. 1, \$1; 2, \$1.50; 3, \$2; 4, \$2.50, dis 3	Hangers   dis 60c
dis 45&10 dis 40&10 dis 40&10 dis 40&10	Glis 333-4   Glis 334-4   Glis 344-4   Gli	75 The "Boss"
dis 45&10	Cowell'sNo. 1, \$18.00; No. 1, \$15.00 P dos, dis 50 Rubber, complete	Anchor (f. & S. Mig. Co)
dis 35 dis 26 dis 20 dis 25	Drawing Knives.  Arlington Edge Tool Co	Harness Sings, 50. dis 4 Anchor (T. & S. Mig. Co.) dis 5 Ser Jud 18, 18x of 1½ changed to \$14.00. dis 55&r Jud 18, 18x of 1½ changed to \$14.00. dis 55&r Hotch kiss' dis 7 Sargent's dis 7 Sargent's dis 6 Covered Spring. dis 45&r dis 45&r Covered Spring. dis 45&r
dis 29	Drawing Knives.	2 Hatchets.
	Witherby Tool Co	Isalah Blood
cking," Nos. cking," Nos. dis 70 so & 60 dis 70	Drills and Drill Stocks.  Blacksmiths' self-Feeding each, \$1.cc, dis rose self-benefits self-Feeding each, \$2.cc, dis rose self-benefits self-Feeding each, \$2.cc, dis rose self-benefits self-benefits each, \$3.cc, dis rose self-benefits, williers Falls. each, \$3.cc, dis rose self-benefits, williers Falls. each, \$3.cc, dis rose self-benefits, williers Falls. each, \$3.cc, dis rose self-benefits, each, \$3.cc, dis rose	Hunt's dis 206.  Shingling, Nos. 123. P dos 87.25 \$8.00 \$8.70 Claw, Nos. 123. P dos 7.75 8.50 9.25
dis 66%&10 dis 45&10 dis 50 nd 50dis 70	Breast, Millers Fallseach, \$3.00, dis 25 Breast, Bartholowniew'seach, \$2.50, dis 25&10 Ratchet, Merrill's	Hurd's
dis 60% for dis 50 ad 45% 10 dis 50 ad 45% 10 dis 70 dis 70% 10 dis 66% for di	Ratchet, Whitney's dis 20 Ratchet, Weston's dis 20 Ratchet, Moore's Triple Action dis 20 Ratchet, Moore's Tr	Lathing, Nos. 123,
**-	Whitney's Hand Drill. dis 50 Wilson's Drill Stocks. dis 10 Automatic Boring Tools. each \$2.25, dis 20	Lathing, Nos. 123
dis 25 dis 55 rr.40, dis 60£10	Morse's Beach Fatent	g Lathing, Nos. 0 1 2 3 \$\forall \text{ doz} \cdot  8.00 \ 8.40 \ 9.00 \ 12.00 \ 14.00 \ 14.00 \ 18.00
din 25 din 25/85 7 8 33.50 36.50	Tag Beaters.   P doz \$2.50, dis 2   Monroe's   dis 50   Mational   P doz \$4.50, dis 2   Monroe's   dis 50   Mational   P doz \$4.50, dis 33's   P amily (T. & S fg. Co.)   P gross \$5.10, dis 2   Triumph (T. & S. Mfg. Co.)   # gross \$5.2, no	Shingling, Nos. 123
	Family (T. & S fg. Co.)	"Lightning"
xx, \$3.00, dis 25; ss \$7.50, dis 10; 250, dis 15@2c; \$8.75, dis 16; \$8.75, dis 25; ss \$7.50, dis 10; \$8.750, dis 10; \$8.750, dis 55; \$8.750, dis 50, dis 50, dis 50; \$8.750, d	Mill E. Buckets, light, 314 to 10 in. (Duc's Improved)  # 100 \$15,00@35,00@35,00, dis 10  Mill E. Buckets, heavy, 5 to 10 in. (Duc's Improved)  # dos \$5,00@\$10.20, dis 10	Gate, N. E. Rever ible W dos \$5.50, dis 55&5&10
ss 87.50, dis 10 be 82.50, dis 10 be 87.00, dis 55 be 85.00, dis 25	Storehouse (Duc's Pat.), 12 to 17, \$12.00 & \$.0.00, dis 10; Emery and Emery Paper. Regular numbers	Gate, N. Y. State
3, \$2.50dis 50.kro iv. 2, \$24; Nodis 50 9 iv. \$2,00, dis 35 9	Emery and Emery Paper. Regular numbers. Flour and F. F.  H. & A. Emery Paper. Sibley's Emery and Crocus Cloth, Large size. \$10; Medium, \$10.50 \times ream. dis 15.5	Gate, Shepard's
00 dia 10810	Enameted and Tinned Ware.  Kettles. dis 457 Sauce Pans dis 254 Tinned Sauce Pans dis 254 Tinned Sauce Pans dis 254 Tinned Sauce Pans dis 257	Rolled Haised. Plate Hinges (8, 10 & 12 in., \$7.00 \$\pi\$ 100 \$\mathbb{D}\$ \cdots \cdots \text{dis to}; "Providence" \(\cdot\) over 12 in., \(\phi\).00 \(\phi\) \(\cdot\) 700 \(\mathbb{D}\) \(\cdot\). \(\dis \text{lin}\), \(\phi\). \(\dis \text{lin}\), \(\dis \text{lin}\
40 die 1085 5	Brassdis 50 5	Strap
700 dia 10 5	Brass ThreadSame discounts as Door Locks	Serew Hook and Rye 5 & 1 ln., 90 dia 1 ln., 90 dia 1 ln., 90 dia 1 ln., 100 20 ft ln., 120 ln.
900   dis 1085 5 900   dis 1085 5 800, dis 10810 5 dis 70810 5 dis 20810 5	Fanucets. Fenn's Pat. Rubber Bail dis 40 9 Hohren's Pat. Rubber Bail dis 25 9 Fenn's Cork Stores dis 215 9	Wrought Strap and T list, Dec. 20, '77dis 40&10&10 Hoes. Riveted Shank
dis 20&10 9 uly '81, dis 10 9 ily, '81, dis 10 9 ily, '81, dis 10 9	Lane's (Self-Measuring). \$\pi\$ dos., \$\pi_50.00\$, 01s 25 9 Star	House   Riveted Shank   # dos #5.00, dis 60   Sooked   # dos #5.25, dis 50   Grub   dis 15   Planters'   dis 35   Soovill Pattern   dis 35
\$5.00, dis 30 \$ \$2.00, dis 40 \$ dis 25 \$	Metallic Key, Leuther Lined dis 50 S Cork Lined dis 70 S Enterprise (Self-Measuring) P doz., \$35.00. dis 25 S	Planters dis 35 Soviil Pattern. dis 29 Soviil Pattern. Handled. dis 20 Soviil Pattern. Handled. dis 20 Soviil Pattern. Handled. dis 20 Soviil Pattern. Dis 20 So
410 6 6	Feliae Plates	Winsted & Lane, Scovill Pattern
dis 25.26.10 \$dis 65 \$dis 60.26 70 \$	Auburn. \$5.00 to £, dis 35 %  R. M. Boynton's new list, dis 25 %  J. & Riley Carr. \$4.50 to £	Bird Cage, Reading dis 25&10&20 Cotton.  P doz \$4.00, dis 20 Cotton, Patented (N. Y. Mailet & Handle Wks), dis 20 S Cotton, Patented (N. Y. Mailet & Handle Wks), dis 20 S Cotton, Patented & Beckley Mfg. Co.)
ir 790)	Johnson & Brodis 30 %	Winsted & Lane, Scovill Pattern. dis 2023 5 Magic. p dos, \$5, not Hooks. dis 252 10 10 10 10 10 10 10 10 10 10 10 10 10
ir 790   dis 35 \$ ir 860   ir 600   dis 35 \$ 5 \$ dis 40 \$ 5 \$ dis 60 \$ 10 \$ 6 \$ dis 60 \$ 5 dis 60 \$ 5 \$	Moss & Gamble	Clothes Line, Sargent's list. dis 65&10 & Clothes Line, Reading list. dis 45&5&10 & Ceiling, Sargent's list. dis 60&10 & Ceiling, Sargent's list.
dis 40 \$	Nicholson. dis 40 % New American. dis 40 % Union File Co. dis 40 %	Coat and Hat, Sargent's list dis 60210 % Coat and Hat, Reading dis 40210 % Picture Hooks, Brown's Pat. Solid Brass, \$4.00 %
gross for net	Union File Co. dis 40 %  Fluting Machines.  Knox, 45 inch Rolls. \$3,50 each dis 25 %  Knox, 56 inch Rolls. \$2,50 each dis 25 %  Knox, 56 inch Rolls. \$2,50 each dis 25 %  Eagle, 354 inch Roll. \$2,50 each dis 25 %  Eagle, 554 inch Roll. \$2,50 each dis 25 %  Crown Jewis each dis 25 %  Crown Jewis each dis 25 %  American, ym., \$3; 6 in., \$2,40 ; 7 in., \$4,50 each, dis 25 %  American, ym., \$3; 6 in., \$2,40 ; 7 in., \$4,50 each, dis 25 %  Ceneva Hand Fluter, White Metal. \$4 dos \$1,4 dis 25 %  Crown Hand Fluter, No. 5, \$6.50 ; \$1.2,50 ; \$1.2,50 g  Shepard Hand Pluter, No. 55 \$6.50 ; \$0.10, \$7.50 ; \$0.50 g  Shepard Hand Pluter, No. 55 \$6.50 ; \$0.50 g  Shepard Hand Fluter and Sad Iron. \$4 dos \$1.50, dis 25 %  Combined Fluter and Sad Iron. \$4 dos \$1.50, dis 25 %  Fluting Scissors. dis 45 \$  Fluting Scissors.	Gross and Picture (T. & S. Mfg. Co.)
gross 8c net gross \$1.00 net gross 190 net	Crown.454 in., \$3.50; 6 in., \$4.00; 8 in., \$6.50 each, dis 25 \$ Crown Jowel	Wire Screw Hooks and Eyes
dis 65&7 % dis 55&10 % list, dis 22% % dis 65&10 %	Domestic Fluter	Hooks and Eves—Brass
dis 65&10 % dis 65&10 % dis 65&10 %	Shepard Hand Fluter, No. 85	Hooks and Eves—Brass     dia Sokio S
dis 65&10 % dis 65&10 % dis 65&10 % dis 65&10 % list dis 22½ % dis 65&10 % dis 65&10 %	Combined Fluter and Sad Iron # doz \$15.00, dis 30 % Buffalo # doz \$10.00, dis 10 % Fluting Scissors	National, ".256 236 260 256 246 236
dis 65& 10 % dis 40@45%	Paragon F doz, #3, net	Ch'mpi'in
5.00 to £	Forks.  Hay, Manure and Spading	Burden
dis 25 % dis 20 % dis 20 % dis 20 % dis 20 % dis 15 % dis 20% re %	Fruit and Jelly Presses, Enterprise Mg. Co. dis 25 3 American dis 20 5 Fry Pans.	Horse Shoes.  R. I. Horse Shoe Co., Perkins' Improved Light, Medium and Heavy.   Prices ruling date Mule Shoes.   of shipment.  Te a wis, Chisels, &c.  American Ice Chisel.   \$\phi\$ doz \$8.5 one National Ice Chisel.   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Noveity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Ice Maliets, Pick in Head   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Ice Maliets, Pick in Handle   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Kitchen lee Tongs   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breakers   \$\phi\$ doz \$8.5 dis 20 \$\phi\$ Novity lee Breake
dis 20& 10 % dis 65& 10 % dis 60& 20 %	Fry Pans.  Burnished list as follows	White's Sliding Head Ploks P doz \$2.50 dis 40 % Dunlap's Ring Picks P doz \$3.00 dis 40 % 10 % Wood Head Picks, Sargent's P doz \$1.60 dis 40 % 10 % Inch Picks, Sargent's P doz \$1.60 dis 40 % 10 % 10 % 10 % 10 % 10 % 10 % 10 %
dis 40&5 % dis 65&5 %	Canges.   dis 50% to 5	Ice Mallets, Pick in Head
dis 35k30 %	Wire, Disston's	Kitchen ice 1 ongs. P dos \$2.5 net Combination ice 7 oois. P dos \$2.0 net Kettiles.  Brass, 7 to 13 inches inclusive. P 5 300 net Brass larger than 13 inches . P 5 300 net Enameled. dis 45 %
dis 40 %dis 40 %dis 40 %dis 40 %dis 40 %	Climlets	Brass larger than 13 inches # 350 net Enameled dis 45 % Knives.  Ames' Butcher Knives dis 20 %
dis 45 %		K nives dis 20% Ames' Blutcher Knives dis 20% Ames' Bhoe Knives dis 15% Ames' Bread Knives \$\pi\$ dos \$1.50\$, dis 15% Moran's Shoe and Bread Knives dis 20% Hay and Straw, Wadaworth's dis 20% Table and Pocket See Cutlery
10.50, dis 25 % dis 25 % dis 25 % dis 25 % dis 40 %	Glue Pots, Tinned and Enameled	Table and Pocket. See Cutlery K nobs.  Carriage (Jap'd Sec ¥ gross). dis 6okto % Base—Common. dis 3okto % Hemacite Door Knobs. new list, dis 33&5 %
n lier pa	Grindstone Fixtures. Sargent's Patent	Hemacite Door Knebsnew list, dis 35&5 % Door, MineralDoor, Por. Jap'dSame discounts as Door Locks.
dis 55 % dis 45 % dis 55 %	Gun Wads.	Hemacite Door Knobs
dis 45 %dis 55 %dis 60%5 % rsdis 50%5 % ledis 40%5 %dis 60 %	U. M. C. P. E., 9 & 10	Picture, Sargent'sdis 60&10 \$ Hemacite Picturedis 35 \$ Shutter, Porcelaindis 50&10 \$
dis 30 %	Horse and Cattle Ties, Covert'sdis 50 \$ Hammers. Mayole's dis 15 \$	L Melting Sargent's dis 45&10 % Melting, Reading dis 26&10 % Melting, Monroe's Patent. % dox 34.00, dis 40 %
.dis 15 @ 20 % Co.dis 3314 %	Maydole's   dis 15	Meiting, P. S. & W
y'sdis 10 %	Magnetic Tack, Nos. 1, 2, 3, \$1.26. 1.50 and 1.75. dis 25&10 S Warner & Noble's	Meiting, P. S. & W.
		Peerless
7.40. dia 20 %	10400 8	De Beque
dia 50 % dia 25 %	Nos o 1 2 3 4 Per dos\$0.80 1.00 1.18 1.34 1.40dis fo&to \$ Roggin's Latches	list dis 30 %  Lemon Squeezers.  Porcelain Lined P dos \$6.00,dis 30 %
dis 35/k 10 %	Jap'd Store Door Handles—Nuts, \$1.35; Plate, \$2.00, no Plate, \$1.10. dis 10 \$ Barn Door. U des \$1.6e, dis 10 \$	Wood.
net	Surface Chest. dis 55&10 \$ Flush Chest. dis 55&10 \$ Flush Chest. dis 55&10 \$ Lifting. dis 50&10 \$	Townsend's Patent \$6.00 \( \text{dos} \) dos dis 33\( \text{dos} \) Jennings "Star" \$3.40 \( \text{dos} \) dos net  Lines,—Lines Pish dis 25\( \text{dos} \) 5  Cotton Challe
dia 25 %	Handles.—Door or Thumb Latches.  Nos o 1 2 3 4.  Per dos\$0.80 Loo. Li8 Li35 L.odis 60&10 5 Roggin's Latches \$\frac{1}{2}\$ dos \$\$40.00 \$\$6.00 \$\$1.00 \$	Pennsylvania. Philadelphia and Excelsior, new list dis 30 % I.emen Squeezers. Porcelain Lined W dos \$6.00,dis 30 % Wood W dos \$0.00, dis 30 % Eureka, Tinned W dos \$0.00, dis 10 % Duniap's Improved. South 10 % dos \$0.00 dis 10 % Duniap's Improved. South 10 % dos \$0.00 dis 10 % Duniap's Improved. South 10 % dos \$0.00 dis 10 % Duniap's No. 1, \$7.50; No. 2, \$12.00 % dos dis 10 % dos and 10 % d
.,,[	Marie Aws,,	the second secon

	_
Hickory Firmer Chisel, assorted, # gross. \$4.50  Hickory Firmer Chisel, large, # gross 5.00  Apple Firmer Chisel, assorted, # gross 5.00  Apple Firmer Chisel, large, # gross 5.00  Apple Firmer Chisel, large, # gross 5.00	dia
Hickory Firmer Chisel, assorted, \$\Pi\$ gross. \$\&4.50\$ g Hickory Firmer Chisel, large, \$\Pi\$ gross. \$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\\$\	(S)
Patent Auger, Douglass'. Set \$1.2 Patent Auger, Douglass'. Set \$1.0 Hangers. Barn Door, old patterns. dis 6c	o, ne
Hangers.  Barn Door, John Landers.  Barn Door, New England.  Challenge.  ("Champion" Medina Mfg. Co	8 50 9 8 10 9 8 10 9
U. S	8 60 9 & 10 9 8 40 9
Harness Snaps. Anchor (T. & S. Mig. Co.)	8 60 % &10 % &1.5 %
Hotch Kias' dil Andrews' dis Sargent's disoco- German disoco- Covered Spring dis ac- Gest disoco- Loco- Loco	& 10 % & 10 %
Hatchets,	0, 10 A
Shingling, Nos. 12 3	3.75
Huru's	30 % 1.00 1.00 1.00 1.00
Lathing, Nos. 123	20 %
Broad, Nos. 1234 dos 9.00 10.00 12.00 14	.00
Lathing, Nes. 123 P dox 6.50 6.50 7.  Hay Knives.	.50
## ## ## ## ## ## ## ## ## ## ## ## ##	10 %
Gate, N. Y. State. # doz \$5.50, dis 50.5 Gate, Automatic. # doz \$12.50, dis Gate, Common Sense dis 20.5 Gate, Seymour's dis 45.6 Gate, Sepmour's Nos. 10.20.52, 6.18, 60.5	10%
Rolled Bifnd Hinges dis 60st Rolled Plate. dis 60st Rolled Plate. dis 60st Rolled Raised. dis 60st Plate Hinges (8, 10 st 12 in., \$7.00 \$100 B } dis 60st Providence "1 over 12 in., \$0.00 \$100 B } dis	10 %
Screw Hook and (8, 10, 12 in., \$7,50 ♥ 100 ₺) .dls . Strap	io %
Serew Hook and Eye	lia o %
Hoes.  Riveted Shank	50 % 50 %
Planters' dis Soovill Pattern. dis Soovill Pattern, Handled. dis Stovill Pattern, Handled. dis Hick's Pat. Solid C. S. Planters' dis 20% 10%; Hick's Pat. Solid C. S. Scovill Pattern. dis 20% 10%; Winsted & Lane, Planters' dis 20% Winsted & Lane, Scovill Pattern. dis 20% Magic. Bdog, \$5,1	15 % 15 %
Winsted & Lane, Scovill Pattern. dis soxy Magic. \$\psi\ dok, \\$\psi_1\] Hooks. \$\psi\ dok, \\$\psi_1\] Hrd Cage, Sargent's list. dis \$5\psi\ dis \$5\psi\ dis \$5\psi\ dis \$5\psi\ dis \$5\psi\ dos \psi_2\psi\ dis \$5\psi\ dis \$5\psi\ dis \$5\psi\ dis \$5\psi\ dos \psi_2\psi\ dis \$5\psi\ dos \psi\ dos \psi_2\psi\ dis \$5\psi\ dos \psi\ dos \psi_2\psi\ dis \$5\psi\ dos \psi\	aet
Cotton, Patented (N. Y. Mallet & Handle Wks), dis 3 Cotton (Humason & Beckley Mfg. Co.). dis 4 Belt. dis 6oct Benob—Hotchkiss', \$5.00 W dos. dis 1 Weston's No. 1, \$5.00 No. 2, \$0.00 W dos. dis 1	**************************************
Belt.  But Hotchkins \$5.00 \( \text{Mos} \)  But Hotchkins \$5.00 \( \text{Mos} \)  Gis a weton's No. 1, \$5.000 \( \text{Mos} \)  Modill's \$5.00 \( \text{Mos} \)  Gis a Modill's \$5.00 \( \text{Mos} \)  Gis a Clothes Line, Sargent's list.  Gis for Cothes Line, Reading its.  Gis in dis 50xt  Ceiling, Sargent's list.  Gis foxt  Coat and Hat, Sargent's list.  Goat and Hat, Reading  Picture Hooks, Brown's Pat. Solid Brass, \$4.00 \( \text{Mos} \)  \$7.008.	-
Coat and Hat, Sargent's list clis coar. Coat and Hat, Reading dis coar. Picture Hooks, Brown's Pat. Solid Brass, \$4.00 % gross. dis 2 Tassel and Picture (T. & S. Mig. Co.). dis 2	***
Picture Hooks, Brown's Pat. Solid Brass, \$4.00 g großs	3 %
Horse Nails.  Nos. 5 6 7 8 9 30  Ansable, # B. 30 270 240 240 230 220 discolution	N N
Horse Nails.  **Nos. 5 7 8 9 30  **Ausable, \$\frac{\psi}{\psi}\$ \$\psi_{\kyk_{\jk_{\pi_{\jk_{\pi_{\kyi_{\psi_{\psi_{\kyi_{\jk_{\pi_{\pi_{\pi_{\jki_{\jki_{\pi	***
Forged " 28e 24c 23c 23c 21c :0cdis to	8
Burden F kog \$4.87	te I
Light, Medium and Heavy.   Prices ruling da tule Shoes.   of shipment.   Prices ruling da tule Shoes.   of shipment.   of ship	et I
Vood Head Picks, Sargent's \$\psi doz \bar{s}.60 dis \$\phi\text{a}\text{c}\text{o} dis \$\phi\text{a}\text{c}\text{o} dis \$\phi\text{a}\text{c}\text{o} dis \$\phi\text{c}\text{o}\text{o} dis \$\phi\text{c}\text{o}\text{o} dis \$\phi\text{c}\text{o}\text{o}\text{o} dis \$\phi\text{o}\text{o}\text{o}\text{o}\text{o} dis \$\phi\text{o}\text{o}\text{o}\text{o} dis \$\phi\text{o}\	S I I
Citchen Ice Tongs	et E
Inameled	* MANA
loran's snoe and break fairws. dis 20 day and Straw, Wadaworth's. dis 32% able and Pocket. See Cutter Knobs. arriage (Jap'd See # gross). dis 60&10 ase—Common. dis 30&10 temacte Door Knobs. new list, dis 35&5 oor. Mineral.	AND WA
cemacite Door Knebs	S F
femactic Door Knebs	X E L
hutter, Porcelain. dis solto a dies.  A Melting—Sargent's. dis 45k70. eiting, Reading. dis 26k70. eiting, Monroe's Patent. dis 26k70. eiting, P. S. & W. dis 30k70. Lanterns. book 25k5; No. 1, Statt; ne	DEP
eiting, P. S. & W	
tna dis 108 20 5	H
nisce dis logico di solico	Si Bi Bi Bi
ankee siedee dis toktoo blee. Small, \$6.25; Med., \$7.50; Large, \$12.00, dis 10.70 novex Refector. \$2.75 v. dos., dis 10.75	SI 81 84 80
rulen's Improved	
mmis'	E SI Ba

d1:	10	Locks and Latches, Cabinet, Eagle
	% et et	Langstroth & Crane's List, Jan. 1. '77  Round Key. Nos. 1 to 5
	MMMMM	Yale Lock Co.         Plat key.         dls 40:           "Sheparison" or "U. S."         dls 40:           "Feitser" or "American"         dls 33/2;           Plate.         dls 33/2;           F.         Many's "Extension Cylinder"         \$10.00 % dos net           DOOR LOCKS, &c.         \$20.00 % dos net
10 60	XXXX	Branford .
60 10 10 10	MMM	Trenton Lock Co
50 10 75 10	MARKE	Norwieh.  P. & F. Corbin. Russell & Erwin. Mallory, Wheeler & Co. Trenton Lock Co Reading Hardware Co. Padlocks-Russell & Erwin. Mallory, Wheeler & Co. Wm. Wilcox & Co Yale Lock Mfg. Co.'s "Standard"  Conestoga. J. H. McWilliams A. E. Diets. "Star"  Mallory, Wheeler & Co.  Vm. Wilcox & Co  Conestoga. J. H. McWilliams A. E. Diets.  J. H. McWilliams A. E. Diets.  J. Star"  Mallory, Wheeler & Co.  Star Mallory, Wheeler & Co.  Also of Conestoga. J. H. McWilliams A. E. Diets.  J. H. McWilliams A. E. Diets.  J. H. McWilliams A. E. Diets.  J. Star"  Mallory, Wheeler & Co.  J. H. McWilliams A. E. Diets.  J. H. McWilliams A. E. Diets.  J. H. McWilliams A. E. Diets.  J. Star"  Mallory, Wheeler & Co.  J. H. McWilliams A. E. Diets.  J. H
75 25 25 75 25		MailetsHickorydis 10% 10 %
30	6	Miles' ChallengeNos. 1 2 3 4 48'rd 5 g'rd
15 15	6	Woodruffs (P. S. & W.)
0000		Draw Cut. Nos. 2 2 6 10 10 Each. \$50.00 75.00 80.00 225.00 400.00—dis 20 \$  American. Nos. 1 2 3 4 B 5  Fach 2 3 4 B 5
0 0 0		Penfield Block Co., Lig., Apple & Hickory
161		Beef Shavers (Enterprise Msg. Co.). dis 25 % Mincing Knives. Am. (2d quality), # gross, 1 biade, 7; 2 blades, \$12; 3
9505050505	1 00 00	Mincing Knives.  Am. (ad quality), P gross, 1 blade, 7; 2 blades, \$12; 3 blades,
***	TO CHAIN	Melanses Gattos,  Rebbins Pattern dis roknos  stebbins Genuine dis roknos  stebbins Tinned Eads dis consiste  consiste dis roknos  stebbins Tinned Eads dis consiste  dis
×	MIM 7	1008, Japanned Finish   1000
a x	ST MIN	add %c to list) quare Nuts
MMMMM	TE	Nut Crackers. able (Humason & Beckley Mfg. Codis 33½ % linke's Pattern
MMMM	UN	Bost P D II c S. Navy P D I0 c avy P D 8 %c
NXX	BMPPO	Alignorm   Alignorm   Alignorm   Alignorm
MMMAN	BB	Imstead's. Brass and Copper. dis 50 % roughton's, Zinc. dis 50 % roughton's, Zinc. dis 60 % r yughton's, Brass. dis 60 % Ox Balls. dis 50% to
XXXXX	F	Dackings, Steam.  N.Y. Belting and Packing Co
** **	000	Pencils. aber's Carpenters' high list, dis 40 km 5 aber's Round Gilt # gross \$5.24, net kxon's Lead # gross \$4.40, net kxon's Lumber # gross \$4.40, net kxon's Carpenters' # gross \$0.74, net kxon's Carpenters' dis 40 km 5 Picture Nalis.
*****	BBPPN	Picture Nalis.  rass Head, Sargent's list.  rass Head, Sargent's list.  roughin Head, Sargent's list.  rocelain Head, Sargent's list.  rocelain Head, Judd's 1815.  rocelain Head, Judd's 1815.  rocelain Head, Judd's 1815.  rocelain Head, Jud's 1815.  rocelain Head, Jud's 1815.  Pinking Irons.
N SK SK	MA	Pinking Irons
	Be	Planes and Pinne Irons.  Clis 25 S  Planes and Pinne Irons.  Clis 25 S  Clis 25 S  Clis 25 S  Clis 25 S
-	Ma Ba Th Ba	oiding
6	La Pl	Min Mfg. CO.
	PI	6 In., \$&.co; io In., \$&.co, each.  Planes and Plane Irons.  such, First Quality
	Bu Ha Hi Ga	tton's Patent ill's Pat. Compound Lever Cutting Nippers, No. 2, in., \$20: No. 4, 7 in., \$30 \( \) dos
	EUREP.	Pliers and Nippers.   dis 20 5
	Du Sta Sta Ch Ch	Plumbs and Levels.         dis 40 %           sston's.         dis 6-2 no.           sston's.         dis 6-2 no.           anley R. & L. Co.'s Non-Adjustable.         dis 6-2 no.           apin's Patent Adjustable.         dis 6-3 no.           apin's Non-Adjustable.         dis 6-3 no.           sindard Rule Co.'s Now Adjustable.         dis 6-3 no.           sundard Rule Co.'s Now-Adjustable.         dis 6-3 no.           sundard Rule C
	Sta Joi Po Da	undard Rule Co.'s Non-Adjustable. dis 66210 % inson's Fatent Adjustable. dis 66210 % inson's Fatent Adjustable. dis 66210 % cket Levels. dis 66210 % vis' Inclinometers. dis 20 %
	Sai Fle Va 6 Eu	vis' inclinometers
1	Ho	ston's Pruning Hook and Saw     ston's Pruning Hook   \$\psi \pm \text{ for \$\frac{8}{15.00}\$, dis 20  \$\frac{5}{10.80}\$, dis 20  \$\frac{5}{10.80}\$     s. Lee & Co.'s Pruner   \$\pm \text{ dos \$\frac{8}{15.50}\$, dis 20  \$\text{ dos \$\frac{8}{15.50}\$, dis 20  \$\text{ dos \$\frac{8}{15.50}\$, \$\text{ dis 60\$}\$, \$\te
To be be be be a second	la l	discord   disc
No less figh 7.0: deed less heat	Ben Ben pr pr len	for Drive. P dos \$2.00; 2.25; 2.50, dis 50 5 dis & Call Co.'s Cast-Steel Drive. dis 50%; 5 dis & Call Co.'s Springfald Socket. dis 50%; 5 dis P dos \$7.00, dis 50%; 5 dis P dos \$7.00, dis 50%; 5 dis & Call Co.'s Spring and Check. dis 6 dis \$7.00, dis 50%; 5 dis & Call Co.'s Spring and Check. dis 6 dis \$7.00, dis 50%; 5 dis 50%; 5 dis 50%; 5 di
AND PRINCES	Ridder I	all, Sliding Door, Wrought Brass \$\psi\$ ago dis zok\$ \$\frac{1}{2}\$ ing Door, Iron, Painted \$\psi\$ foot 40. dis zok\$ \$\frac{1}{2}\$ in Door. Inch \$\frac{1}{2}\$
١,	B	Amore.

February 1882.	l states
Raser Straps.  Genuine Emerson	States.  Square Frames, by case
Badger's (not Emerson)	Spoke Shaves, Defiance Metallic
Hunt's	Iron. dis Wood. dis 30 Bailey's (Stanley R. & L. Co.), new list dis 30 Stearns' dis 30
Rivets.	Spoke Trimmers.
Hivets.  Iron and Tinned, new list, Dec. 10, 1881. dis 40% in bulk, new list, Dec. 10, 1881. dis 40% Copper Rivets and Burrs. dis 335 Copper Rivets and Burrs. dis 335 % \$\pi\$ \pi\$ 40 500 520 540 550 580 600 650 700 40 \$\pi\$ Eivet Sets. dis 40 %	Bonney's   P doz \$10.00, diq # Stearms'   P doz \$10.00, dis ro     Stearms'   P doz \$9,00, dis ro     Ives'   No. 1, \$15.00; No. 2, \$12.00 P doz, dis 50     Douglass'   P doz \$9,00, di
₩ m. 49c 50c 54c 54c 56c 58c 60c 65c 70c 40 %	Speens. Bastingdis 60%100
	Solid Table and Tea. di Britannia. di
Stair, Black Walnut dis 25 Stair, Black Walnut dis 40 Stair, American Patent dis 20 Stair, Ameri	Hall & Elton
Barn Door, Sargent's listdis 602:108:10 % Acme (Anti-Friction)dis 50 %	Basting. dis 60% to Riveted Table and Tea. dis 50% to Riveted Table and Tea. dis 50% to Riveted Table and Toa. dis 180% to Riveted Table and Toa. dis 180% to Reed & Barton. dis 40% Hall & Elton. dis 40% Holmes, Booth & Haydens. dis 50% to Riveted Cast Steel, Silver Plated. dis 50% to Riveted R
Hnfs' Net Li-t, Oct. 5, 1891, dis on 5000 B and	Tin (P. S. & W.), Tables
Manila	"Lightning" Screw Platedie
Report   March   Mar	Stone
Sisal	Sand Stone
Sisal, Hay Rope	Washita Stone, Slips
Standarddis 66%&to \$dis 55&to \$ standeydis 66%&to \$dis 55 % stephens	Turkey Oil Stone (Chase)
Cad Ireus.  From 4 to 10 b. \$350 net Self-Heating, Tallors \$4 dos \$0.00 net Self-Heating, Tallor	
Self-Heating, Tailors P dos \$18.00 net	Joseph Dixon's r gross \$6.00, di Gem. r gross \$4.50, dis
Mrs. Pott's Irons. Square Back. dis 35% 5 % Enterprise Star Irons. dis 40% 5 %	Stove Folish   Joseph Dixon's   Pgross \$6.00, di Joseph Dixon's   Pgross \$6.00, di Gem   Pgross \$6.00, di Gold Medal   Pgross \$6.00, di "Mirror   Pgross \$6.00, di Ruby   Pgross \$6.00, di Ruby   Pgross \$5.7 Rising Sun   Pgross \$5.7 Dixon's Flumbago   Pgross \$5.7 bixon's Flumbag
mand Paper. Baeder & Adamson's Flint, so to 136. 84.75 F ream	Dixon's Plumbago
Bacder & Adamson's Filit, Assorted. 4.75 F ream Bacder & Adamson's Star 3.75 F ream Bacder & Adamson's Energy From \$0.06 Lts.	Steeldis 50 %; full cases, dis 50&10 %) Irondis 50 %; full cases, dis 50&10 % Nickel Platedadd \$2.50 @ \$4.00 \text{\$\$\text{\$\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exititt{\$\text{\$\te
Combined Fluter and Sad Iron # dox #15.05, dis 15.78 and Paper.  Baeder & Adamson's Flint, to to 15.4. \$4.75 \( \tilde{\pi} \) ream  Baeder & Adamson's Flint, to 25.66 \( \tilde{\pi} \) . 5.55 \( \tilde{\pi} \) ream  Baeder & Adamson's Flint, Assorted. 4.75 \( \tilde{\pi} \) ream  Baeder & Adamson's Star	Squares,   Steel
New England, same list as E. & A. Flintdis 30 % Gage's	Winterbottom's Try and Miter dis 200    Facks, Brads, &c.   List of April 2, 1880.   List of April 2, 1880.   List of April 2, 1880.   List of April 3, 1880.   List of Copper Tacks and Nails   List of
Sash Ceru.	Tinned American Tacks dis 60 Swedes Tacks, all kinds dis 40 Copper Tacks and Salls
silver Lake, White Cotton. # 5 500, dis 10 8	Swedes Hungarian Naiis
	Finishing Nails dis 30 Trunk and Clout Nails dis 30 Common and Patant Parada
Clark's, No. 1, \$10.00; No. 2, \$8.00 per grossdis 33\5 % Ferguson'sdis 33\5 %	Basket Nails dis 30 Brush Tacks dis 25 Brush Tacks dis 25
Hammond's Window Springs	American Cut Tacks dis 33/4 Cigar Box Nails dis 33/4
Hash Lecks.  (Llark's, No. 1, \$10.00; No. 2, \$3.00 per grossdis 33/5 % per guson'sdis 33/5 % per guson'sdis 33/5 % per guson'sdis 33/5 % per guson'sdis 35/5 % per guson'sdis 35/5 % per guson'sdis 35/5 % per guson'sdis 35/5 % per guson's per guson	Chair Nails
Sash Weights.	Common and Ringdi
Sansage Souffers or Fillers. # doz \$20 dis 30 %	Tapes, Measuring,
Solid Eyes, in 500 B lots and over.       # B 1%c net         Banaage Suffers or Fillers.       # doz \$20 dls 30 %         Hiles.       # doz \$20 dls 30 %         Forry.       # doz, No. 15; No. 0, \$21, dls 30 %         Straw Cut No. 4       each \$30.00, dls. 20 %         Enterprise Mfg. Co.       dls 25 %         Ellvar's.       dls 25 %	Thermometers,
Saws.	Tobacco Cutters. dis 70
Disston's Circular	Wood Bottom # doz \$12.00, dis 40 All Iron # doz \$0.50, dis 40 Nashua Lock Co a # doz \$0.50, dis 40
Disston's Hand, Panel, Rip. &c	Wilson's dis
Boynton's Billet Webs, 3c inch. new listdis 25 % Boynton's Lightning Buek Saws X Bardis 25 % Boynton's Lightning Hand, Panel and Ripdis 25 %	Winsted
Wheeler & Clemson Mfg. Co. 's Hand	Machines (P. S. & W.). list add Tools (P. S. & W.). ad
vington's Framed Wood- Nos	Wollenack's Patent, new list, Feb., 1882dis 20210
Enterprise Mfg. Co. dis a 2 %  Haws. dis 2 %  Haws. dis 2 %  Dission's Circular. dis 40 %  Dission's Mill. dis 40 %  Dission's Co. dis 10 %  Dission's Co. dis 40 %  Doynton's Lightning Cross Cuts, new list. dis 20 %  Doynton's Lightning Hore Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Doynton's Lightning Buck Raws X Bar. dis 20 %  Distington's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Framed Work Raws X Bar. dis 20 %  Livingston's Frames.  White, Vermont.  Saw Frames.  White, Vermont.  Saw Hots.  Sounds Work Raws X Bar. dis 20 %  Livingston's Raws X Bar. dis 20 %  Saw Hots.  Sounds Work Raws X Bar. dis 20 %  Livingston's Raws X Bar. dis 20	Traps. Game. Newhouse
Saw Sets.	Game, Oneida Pattern
Soynton's Patent X Cut, per doz, \$11.50; Hand Saw per doz, \$10.50	mouse, kound wire. # doz \$1.50, dl. Mouse Cage, Wire. # doz \$2.50, dl. Mouse Catch-em-alive. # doz \$2.50, dl.
Stillman's imitation — v dos \$3.25, dis 30210 \$ common Lever. — v dos \$2.25, dos 20210 \$ caoh's	Trewels Lothrops' Brick and Plastering
Nash's. Hammer, Hotchkiss.  Society of the second of the s	Reed's Brick and Plastering dis Disston's Brick and Plastering dis Peace's Plastering dis
Semis & Call Co.'s Plate dispersion of the semis & Call Co.'s Cross Cut. dispersion of the semis & Call Co.'s Cross Cut.	Clement & Maynard's. dis Rose's Brick. dis Brades' Brick dis
Alken's Imitation	Worrall's Brick and Plasteringdi
forrill's	Butter and Cheesedis
Hatch, Counter, No. 171. P. doz \$42, dis 37/6&10 % Hatch, Tea, No. 161. P. doz \$15.00, dis 37/6&10 % Inton Platform	Vises. Solid BoxList of Yulve to die
'airbanks'	Solid "Crown" (A. H. Hildick)40 to 100 B, 19
lowe's dis 20210 %  Latillon's Grocers' dis 20210 %  Latillon's Euralia dis 40 %	Parallel, Parker's
amily Universal	Parallel, Howard's
cale Beams, List of January 12, 1882dis 33/5&10 %	Parallel, Backus and Union dis SQL Parallel, Oval Slide dis Parallel, Double Screw Leg.
djustable Box Scraper (S. R. & L. Co.), \$0.50, dis 20&10 % lox, 1 Handle	Parallel, Prentiss
Defiance Box and Ship	Saw Filers, Bonney's
Screw Drivers.	Reading. The dot \$17.50, dis 45. Cowell Hand Vises. dis 45. Richardson's Vise and Angli
Oouglas Mfg. Co	Washer Cuttors.
dis 25 % tanley Rule & Level Co.'s, Varnished Hdlsdis 50&10 % tanley Rule & Level Co.'s, Black Handlesdis 40&10 %	Johnson's dos \$11.00, dis 3 Penny's P dos \$14.00 and \$16.00, dis 3 Appleton's P dos \$14.00 and \$16.00, dis
argent & Co.'s	Washers.—See Nuts and Washers. Well Wheelsdis 608 red
Cowles Hdw. Co., No. 1 Extradis 40&10 % Cowles Hdw. Co., No. 1	Wire.  Brass and Copper, list of June 10, 1880dis 20 Bright and Appealed
Sark's Patentdis 25 %	Bright and Annealed Nos. 19 @ 26, dis Bright and Annealed Nos. 27 @ 36, dis Coppered Nos. 27 @ 36, dis
tound Head Iron New list April 27, 1881. dis 32 % Tat Head Brass . New list April 27, 1881. dis 36 % Cound Head Brass . New list April 27, 1881. dis 30 %	Galvanized, Nos. o to 18
reas and Silver Capped dis 40 % apanned, list of Plain Screws dis 20 % dis	Tinned Broom Wire, Nos. 18 to 25. dis Annealed Fence, Nos. 8 & 9. dis 55 @ 5
Common or Las	Galvanized Telegraph, Nos. 7 to 9
Sed dis to 5	I Wanne Otenies
sed dis 10 sech di	Fence Staples. Galvanized. # 5 04 @ Stubs Steel Wire.
	Fonce Staples, Galvanized. \$\pi\$ 54 @ Fonce Staples, Galvanized. \$\pi\$ 57 @ Stubs Steel Wire. \$\pi\$,7.00 Jananued Barb Fence. \$\pi\$ Gavanized Barb Fence. \$\pi\$ B Steel Music Wire. \$\pi\$
sed dia to \$  fachine, Fint Head, Iron dia 55  fachine, Round Head, Iron dia 55  sench, Fron dia 55  sench, Fron dia 55  sench, Fron dia 55  sench, Wood, Beech For dia 50  sench, Wood, Hickory dia 20  fand, Wood dia 20  fand, Wood dia 20  fand, Sargent's dia 60  fand, Rail, Sargent's dia 60  fand Rail, Humason, Beckley & Co. 3. dia 48  fand Rail, Ann. Serew Co., list of Jan. 1, 81  dia 48  fand Rail, Ann. Serew Co., list of Jan. 1, 81  dia 78  dia 68  dia 78  dia 68  dia 78  dia 68  dia 78	Fonce Staples, Galvanized. \$\psi\$ 5 \(\psi\$ of \$\psi\$ 100 \)  Stube Steel Wire. \$\psi\$ 7 \(\psi\$ \)  Japanned Barb Fence. \$\psi\$ 2 \(\psi\$ \)  Geometric Steel Must Wire. \$\psi\$ 0.0 \(\psi\$ \)  Steel Must Wire. \$\psi\$ 0.0, Ficture Wire, low list Turner & Seymour Mig Co. Ficture Wire, low list Judd's Picture Wire. \$\psi\$ 1.25
Series Windew Balances.  2 B B Burning Series Series Series Windew Balances.  2 R B R Burning Series	Fonce Staples, Galvanized. \$\psi\$ 5 \( \)
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Scroll Saws	Wrenches. American Adjustable. dh Baxter's Adjustable "8," list Jan., 1880. dls 26 Baxter's Diagonal dis 26 Coes' Genuine. dis 26 Coes' Genuine. dis 26 Coes' Pattern, Mallesble. dis Coes' Pattern Wrought. dis
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Scroll Saws, caser, \$10.00. dis 20 % caser, \$10.00. dis 25 %	American Adjustable
Scroll Saws.  cater, \$10.00.  dis 20 5  cater, \$10.00.  dis 25 5  Shears and Scissors.  merican (Cast) Iron.  dis 70 5  runing.  see Fruning Hooks and Shears.  arnard's Lamp Trimmers.  \$4 dos \$3.75  inners'  dis 15  cymour's. List, Dec. 1881.  dis 15  di	American Adjustable dh Baxter's Adjustable "8," list Jan., 1980 dis ze Baxter's Adjustable "8," list Jan., 1980 dis ze dis ze Coes' Genuine dis sector Coes' Pattern Malleable dis coes. Coes' Pattern Wrought dis Girard Standard dis Girard Agi dis Bemis & Call's Patent Combination dis Bemis & Call's Merrick "Fattern dis Bemis & Call's Coester dis Bemis & Call's Coester dis Bemis & Call's Riggs' Pattera dis Bemis & Call's Cylinder or Gas Pipe dis Yan Wagoner & Williams' Basin \$\frac{1}{2}\$ doc Alken Focket (Bright) \$\frac{1}{2}\$ doc 485, dis Webstar's Patent Combination \$\frac{1}{2}\$ doc 485, dis Webstar's Patent Combination \$\frac{1}{2}\$ doc 485, dis Webstar's Patent Combination \$\frac{1}{2}\$ doc 485, dis
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Slates.	ш
Square Frames, by case dis 70 \$  Less than a case dis 65&10 \$  Spoke Shaves,	П
Spoke Shaves.  Defiance Metallic dis 20&10 %  Iron dis 45 %  Wood dis 20&10 %  Stearns' Stanley R. & L. Co.), new list dis 20&10 %  Stearns' dis 20&10 %  Spoke Trimmers.	100
Bonney's P doz \$10.00, dl4 40&5 \$ Stearns' P doz \$9.00, dis 20&10 \$ Ives' No. 1, \$15.00; No. 2, \$12.00 \$ doz, dis 55&10 \$ Douglass' \$ \$	I. Fr
Species	
Species   Spec	X. X
	A
Hinuosan No. 1, 6c ; Axe, 8c	1
Grindstones, ramity, Loring's	An
Squares. dis 50 %; full cases, dis 50&to % 2 % Steel	
Disston's Try Square and T Bevels. dis 40 % Winterbottom's Try and Miter dis 20% 10 % Tacks, Brads, &c. List of April 2, 1850. Tinned Swedes Tacks. dis 50 %	T
Winterbottom's Try and Miter	pres upo abo pos ven pen Mill
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Tap Borers. dis 20 % Common and Ring. dis 20 % Ives' Tap Borers. dis 15&10 % Enterprise Mfg. Co. dis 25 % Tapes, Measuring.	For
Tapes, Monsuring, American	For P
Tin Case	For For
Tobacco (!utters, Enterprise Mfg. Co. (Champion).   dis 25	For For ti
Too Calks. Winsted	pon
Tinners' Tools and Machines.  Machines (P. S. & W.)	cha star
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Traps.  Game, Newhouse.  Game, Onelda Pattern.  dis 5,55,5  Game, Blake's Patent.  dis 9,5  Mouse, Wood, Choker.  # dos holes, 10-6c  Mouse, Round Wire.  # dos \$1,50, dis 10-7  Mouse Catch-em-alive.  # dos \$2,50, dis 10-7  Mouse. Catch-em-alive.  # dos \$2,50, dis 10-7  # dos \$3,50, dis 10-7  # dos	١
Trewels. Lothrops' Brick and Plastering dis 25 % Reed's Brick and Plastering dis 15 % Disston's Brick and Plastering dis 20 % Peace's Plastering dis 30 %	
Trewels. Lothrops' Brick and Plastering. dis 25 g Reed's Brick and Plastering. dis 25 g Reed's Brick and Plastering. dis 20 g Reed's Brick and Plastering. dis 20 g Reed's Brick and Plastering. dis 20 g Reed's Brick dis 20 g Worrall's Brick and Plastering. dis 20 g Garden. dis 55 g Referes. dis 55 g	ALL LAND
Procks (Wanshamen Ass.)	
Solid "Crown" (A. H. Hildick).	W
Parallel, Wiscon's	Sen
Parallel, Double Screw Leg     dis 16210 %       Parallel, Prentiss     dis 25 %       Parallel, Simpson's Adjustable     dis 25 %       "Family," List     net       Saw Pilers, Bonney's     \$ dox \$24.00, dis 20\$10 \$	G
Penfield Block Co	
Washer Cutters.       ₩ dos \$12.00 dis 35 %         Johnson's.       ₩ dos \$11.00 dis 33% %         Penny's.       ₩ dos \$14.00 and \$16.00 dis 55 %         Appleton's.       ₩ dos \$16.00 dis 50.00 %         Washers.       See Nuts and Washers.	
Well Wheelsdis 60&10&10 ≸	I,
Wire.  Brass and Copper, list of June 10, 1880. dis 20 % 5 8 17 ght and Annealed. Nos. 0 @ 18, dis 50 @ 13 / 5 8 17 ght and Annealed. Nos. 10 @ 25, dis 50 % 17 ght and Annealed. Nos. 27 @ 26, dis 65 % Coppered. Nos. 0 @ 18 dis 47 @ 47 / 5 % Galvanized, Nos. 0 to 18. market list, dis 40 @ 45 % Tinned, Nos. 0 to 18. dis 40 @ 45 % Cast Steel. dis 40 @ 45 % Tinned, Nos. 0 to 18. dis 40 @ 45 % Tinned, Nos. 0 to 18. dis 40 @ 45 % Tinned Nos. 0 to 18. dis 40 @ 45 % Tinned Broom Wire. Nos. 18 to 26. dis 50 % d	79
Annealed Fence, Nos. 8 & 9. dis 55 @ c1/6 \$ Annealed Grape, Nos. 10 to 14. dis 50 @ c1/6 \$ Galvanised Telegraph, Nos. 7 to 9. \$2. 7 t/6 Galvanised Telegraph, Nos. 10 to 11. \$2. 8 \$2. 6 Galvanised Telegraph, Nos. 10 to 11. \$2. 8 \$2. 6 Galvanised Telegraph, Nos. 10 to 11. \$2. 8 \$2. 6 Galvanised Telegraph, Nos. 10 to 11. \$2. 6	
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Judd's Picture Wire. dis 80%20 & Clothes Line Wire, Galvanized. P coil 25 & 40 net Wire Cloth, green and drab. P coil 25 & 40 net Wrenches. American Adjustable. dis 45 & Baxter's Adjustable '8," list Jan. 1880. dis 2085 & Saxter's Adjustable '8," list Jan. 1880.	
Wrenches.	
Coes' Pattern Wrought. dis 55 g Girard Standard. dis 50 g Girard Agl. dis 50 g Girard Agl. dis 50 g Bemis & Call's Patent Combination. dis 20 g Bemis & Call's Merrick 'sPattern dis 35 g Bemis & Call's Briggs' Pattern. dis 25 g Bemis & Call's Cylinder or Gas Pipe. dis 40 g Van Wagoner & Williams' Basin. \$\pi\$ doz \$\pi\$4.50 Alken Pocket (Bright). \$\pi\$6.00, dis 60\$\text{cos} to 5 The Favorite Pocket (Bright). \$\pi\$6.00, dis 60\$\text{cos} to 5 Webster's Patent Combination. dis 75 \$\pi\$	١.
The Favorite Pocket (Bright). # dos \$8, dis \$6 \$ Wester's Patent Combination dis 7; \$ Wringers. Per dos. Universal, XX, No. 24. \$60.00 Universal, XX, No. 2. \$60.00 Universal, XX, No. 2. \$60.00	

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he per cent. of Carbonate of Lime, and oluble Silicious Matter in a Limestone. 10,00 and additional constituens 200 he per cent. of Water, Voiatile Combustie Matter, fixed Carbon, and Ash in Coal, 12,50 nie matter, fixed Carbon, and Ash in Coal, 12:50 or determining the constituents of a Clay, Sing, te, or of an Ash in Coal the charges will correst dwith those for the constituents of an ore. or a written opinion or letter of instruction the trge must necessarily depend upon circum-

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American Iron Foundry, No. 1x.	oc 12 Per cent.
Gray Forge \$\text{pton}\$ 25, Scotch Iron.	16 Per cent.
\( \text{Vity Forge.} \) \( \psi \) ton \( 24 \) \( \text{Forge.} \) \( \text{Forge.} \) \( \text{Forge.} \) \( \text{Forge.} \) \( \text{Von} \) \( 25 \cdot \) \( \text{Carmbree} \) (to \( 12 \) \( \text{Cormbree} \) \( \text{Von} \) \( 25 \) \( \text{Cormbree} \) \( \text{Von} \) \( 27 \) \( \text{Cormbree} \) \( \text{Cormbree} \) \( \text{Von} \) \( 27 \) \( \text{Cormbree} \) \( \text{Carmbree} \) \( \text{Von} \) \( 25 \) \( \text{Cormbree} \) \( \text	is Per cent. is Per cent. recent. rece
Glengarnook	above 11, 3c & B; over 11, 3/cc Railway Bars, 1/cc & B. Rail
Redcar No. 3 Fton 22.	from Iron by the Bessemer or whatever form or description
Palls	American Cast Steel. For American Steel see quota
Tron, a mill.   P tom \$48.00 @ 50.   Steel, at mill (1882 delivery)   P tom 57.00 @ 50.   Old Rails To   P tom 30.00 @ 31.   Old Rails D H   P tom 32.00 @ 31.	© English Steel.  Best Cast
Scrap. Scrap # ton, from yard \$33.00 @ 33- Wrought Scrap, to arrive 31.40 @ 32.	
Bar Iron from Stere.	Best Double Shear
to i in. round and square	German Steel, Best.
	Sheet Cast Steel, 1st quality
	c ANTIMONY
Norway Nail Rods	
Sheet Iron. Common R. G. American. Nos. 10 to 20.  **B 4 c 5 c	BMAC CONTRACTOR CONTRA
Nos. 10 to 20.   Nos. 20 to 20.   Nos.	Sheet
27	Shot. Chilled Shot.
Galvanized, 10 to 20	N. P. U.  A. 250 B. 200 C. 14.  Tin.—Dury: Plates, Sheets, T  B. Electro-galvanized Plat  tures of, not enumerated, 35  Ellock and Pigs free. Bauca,  per cent.
Galvanized, 25 to 26 B 10 c 84/c Galvanized, 27 B 10/c 0 0	tures of, not enumerated, 35 r
Galvanized 28 B 111 gc 914c Patent Planished B 1014c B. 914c	Block and Pigs free. Banca, per cent.
A acrican Cold Rolled	Banca. Straits English. TIN PLATES
per 40 % b; Manufactured (including all articles o which Copper is a component of chief value), 45;	TIN PLATES I C 10X14 PrimeCharcoal
American ingot w m see trade report	I U 12X12 Prime Charcoai
Prazier. Copper, ordinary sizes, 16 oz. per sq. ft., and o er # 8	I X 14X20 Prime Charcoal
Braziers' Copper, ordinary sizes, under 16 oz. and over 12 oz., & sq. ft	D U 1256X17, Prime Charcoal D X 1256X17, Prime Charcoal
Braziers' Copper, 10 dr. and 17 dr., \$\psi\$ 34 Braziers' Copper, Lighter than 10 or. \$\psi\$ sq. ft. \$\psi\$ 33 Creics less than 84 in. in diameter \$\psi\$ 33	COKE TIN PLA
Circles 84 in. diameter and over	I C 10X14
SHEATHING DRAZIES COPPER, BOLTS, &C. Prazler', Copper, ordinary sizes, 16 oz. per sq. ft., and o er \$\psi\$ b. Grazler's Copper, ordinary sizes, under 16 oz. and over 12 oz., \$\psi\$ sq. ft \$\psi\$ 5z. Brazlers' Copper, to oz. and 12 oz., \$\psi\$ sq. ft \$\psi\$ 5z. Brazlers' Copper, to oz. and 12 oz., \$\psi\$ sq. ft \$\psi\$ 5z. Gracis less than \$\psi\$ sq. in. In diameter \$\psi\$ 5z. Circles \$\psi\$ in. (diameter and over \$\psi\$ 5z. Circles \$\psi\$ in. (diameter and over \$\psi\$ 5z. Comotive Fire Box Sheets \$\psi\$ 5z. Sheathing Copper, over 12 oz. \$\psi\$ sq. ft \$\psi\$ 5z. Sheathing Copper, over 12 oz. \$\psi\$ sq. ft \$\psi\$ 5z. Copper Bottoms \$\psi\$ 5z. No Copper is Sheathing except 14xz0 inches, sud not to exceed 34 oz. to the sq. ft. TINNING.	TERNE PLATI
Copper Bottoms. \$\tilde{\pi} \ \tilde{\pi} \	TERNE PLAT Prime Char. at I C 14820 85,75 @ 0.00 5.50 I X 14820 7,50 @ 11.5 I X 20828 12,25 @ 11.5 I X 30838 15,50 @ 11.5 I C 14820 M. F. Brand. EXTR. b ER 62 %.
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All other size Sheets, 256 F sq. ft. For tinning both sides, double the above amount.	IC 14X20 M. F. Brand.
O'NEILS PATENT PLANISHED COPPERNot.	
14 and 16 oz. and heavier. ** \$\mathbb{B}\$ 370 By the case. ** \$\mathbb{B}\$ 360 \$\mathbb{E}\$ = 0.2. and lighter ** \$\mathbb{B}\$ 400 \$\mathbb{B}\$ \$\mathbb{B}\$ 500 \$\mathbb{B}\$ \$\mathbb{B}\$ 500 \$\mathbb{B}\$ \$\mathbb{B}\$ 101. \$\mathbb{B}\$ 14. \$\mathbb{B}\$ 101. \$\mathbb{A}\$ 14. \$\mathbb{B}\$ 0.2. and heavier. ** \$\mathbb{B}\$ 390 By the case. ** \$\mathbb{B}\$ 380 (And all sizes not over 20 in. wide.) \$\mathbb{A}\$ 24483832000 \$\mathbb{A}\$ 24483832000 \$\mathbb{B}\$ 380 \$\mathbb{B}\$ \$\mathbb{B}\$ 380	Prop. American, cash
Boiler Sizes. 7 in., 14X52. 8 in., 14X50. 9 in., 14X50.	ZINCDUTY: Pig or Block, &
(And all sizes not over 20 in, wide.)	Sheet, Cask. Sheet, Open.
14 and 16 os. and heavier	Danon Stool
Brown & Sharp's Gauge the Standard for Metals. Old English Gauge the Standard for Wire.	Taper Stock
BRASS MANUFACTURERS' PRICE LIST.—dis. 20 @ 25 %.	(aremera menny a
June 10, 1880.  Cash prices for Roll and Sheet Brass. For less quanties than 100 35 add 30. \$\Phi\$ 3.	White Shirt Cuttings, No. 1
WIGH BRASS	Mill Assorted Whites Unbleached Musilias City Whites, No. 1. New Canton Flannels. New Seconds, Iight. New Seconds, dark No. 2 Whites Cotton Canvas Linen Canvas, No. 1. Seconds, City No. 1. Seconds, City No. 1. Seconds, City No. 2. Colors, per 10e 286.
All Nos. not thinner than to No. 28, wider than 2 in., not wider than 1 in	New Seconds, light
in, inclusive	No. 2 Whites
de. & b advance on each No. above Nos. 28 to 38, In-	Seconds, City No. 1
All Brass thinner than No. 8 is Platers' Brass, at530 Sheets 24748, and all sheets cut to particular sizes and lengths under 30 in., in width wider than 2 in. 370 Printers' Rules	Manila Rope.
Printers' Rules	Gunny Bagging, No. 1 Gunny Bagging, No. 2
Circular Sheets, in diam. from 4 in. to 14, inclusive40c	Kentucky Bagging Burlap Bagging, No. 1
Shoots wider than 30 in. and under 40 is	Hemp Twine Stock
LOW BRASS. C & B more than High Brass. Cityling Vetal Se & B more than High Brass.	Soft White Shavings, No. 1 White Shavings, No. 2, soft
Gilding Metal, Sc P B more than High Brass. In Bars	Ledger and Writing
	Book Stock, No. 1, light
Planed or Polished540	Our Newspapers
Planed or Polished	Scounds, City No. 1. Scounds, City No. 2. Colons, per Loe 8. Manila Rope, Tarred. Gunny Bagging, No. 1. Gunny Bagging, No. 2. Kontucky Bagging, No. 2. Kontucky Bagging, No. 1. Tar Shakings. Hard White Shavings, No. 1. Soft White Shavings, No. 1. White Shavings, No. 2. soft. Mixed Shavings, part white. Lodger and Writing. Lodger and Writing. Book Stock, No. 1. light. Oid Newspapers Pure Manilas. Bogus Manilas and Hardwares. Commons per 100 lbs.
Planed or Polished	Out Newspapers Pure Manilas Bogus Manilas and Hardwares Commons per 100 lbs Binders' Board Cuttings Straw Board Cuttings
Piaters or Gold Retail Planed or Polished Signature Metal, in width 1 in to 1/4 in to No. 28, inclusive, 10 \$\pi\$ ned ance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 2c \$\pi\$ ned advance.  Metal, in width 1 in. to 1/4 in. thinner than No. 28, 9c \$\pi\$ ned thinner than No.	Binders' Board Cuttings
Piaters or Gold Retai  Planed or Polished  For suffring.  Metal, in width in. to \( \frac{1}{2} \) in to No. 23, inclusive, 10 \( \psi \) as \( \frac{1}{2} \) in thinner than No. 28, 2c \( \psi \) advance.  Metal, in width \( \frac{1}{2} \) in. to 1 in. thinner than No. 28, 2c \( \psi \) advance.  Metal, in width \( \frac{1}{2} \) in. thinner than No. 28, 3c \( \psi \) b advance.  Metal, is width \( \frac{1}{2} \) in to \( \frac{1}{2} \), inclusive, not thinner than No. 28, 2c \( \psi \) b advance.  Metal, is width \( \frac{1}{2} \) in to \( \frac{1}{2} \) thinner than No. 28, 3c \( \psi \) b advance.	Paints, Oils
Pinters or Gold Jethi Planed or Polished	Paints, Oils
Piaters or Gold Retai  Planed or Polished  For SITTING.  Metal, in width i in. to § in. to No. 28, inclusive, io \$\psi\$ and ance.  Retal, in width 2 in. to 1 in. thinner than No. 28, 2c \$\psi\$ advance.  Metal, in width 2 in. to ½ in. thinner than No. 28, 3c \$\psi\$ advance.  Metal in width ½ in. to ½ inclusive, not thinner than No. 28, in \$\psi\$ advance, advance, and \$\psi\$ in. to ½ thinner than No. 28, 5c \$\psi\$ advance.  Metal, \$\psi\$ in. in width and leas, soc \$\psi\$ advance.  Any of the above widths cut to particular longths, add  To \$\psi\$.	Paints, Oils
Planers or Gold Jethi Planed or Polished Signed or	Paints, Oils
Planed or Polished  Planed or Polished  For STITTING.  Metal, in width in to ½ in to No. 28, inclusive, 10 \$\mathbb{P}\$ as a vance.  Metal, in width in to ½ in thinner than No. 28, 2c \$\mathbb{P}\$ advance.  Metal, in width in to ½ in thinner than No. 28, 2c \$\mathbb{P}\$ advance.  Metal, in width ½ in to ½, inclusive, not thinner than No. 28, 2c \$\mathbb{P}\$ be advance.  Metal, it width ½ in to ½, thinner than No. 28, 5c \$\mathbb{P}\$ be advance.  Metal, it width ½ in to ½, thinner than No. 28, 5c \$\mathbb{P}\$ be advance.  Metal, ½ in Lin width and less, 1cc \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 7c \$\mathbb{P}\$.  OERMAN SILVER MARKET METAL AND WIRE.  Market Metal, Wire  \$\mathbb{P}\$ corden, 12 inch to No. 26.  \$\mathbb{P}\$ 5.5  \$\mathbb{P}\$ 4.76  \$\mathbb{C}\$ 1.5  \$\mathbb{C}\$ 1.5  \$\mathbb{C}\$ 4.68  \$\mathbb{S}\$ 1.5  \$\mathbb{C}\$ 1.64  \$\mathbb{C}\$ 1.68  \$\mathbb{S}\$ 1.5  \$\mathbb{C}\$ 1.64  \$\mathbb{C}\$ 1.68	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Pianers or Gold Retai  Planed or Polished  Soc  For SILTTING.  Metal, in width 1 in. to 1/2 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and ance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 5 in. to 1/2 in. thinner than No. 28, 30 \$\mathbb{P}\$ advance.  Metal in width 5/2 in. to 1/2, inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 5/2 in. to 1/2, thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal in width 5/2 in. to 1/2, thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, 1/2 in. in width and less, 100 \$\mathbb{P}\$ advance.  Metal, 1/2 in. in width and less, 100 \$\mathbb{P}\$ advance.  Metal, 1/2 in. in width and less, 100 \$\mathbb{P}\$ advance.  Metal, 1/2 in. in width and less, 100 \$\mathbb{P}\$ advance.  Metal in width 5/2 in. to 1/2, thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 30 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal in width 2/2 in. to 1/2, thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Met	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Planers or Gold Retai  Planed or Polished  For SITTING.  Metal, in width it in to ½ in to No. 28, inclusive, 10 % B advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 2c % B advance.  Metal, in width 1 in. to ½ in. thinner than No. 28, 2c % B advance.  Metal, in width 1 in. to ½ in. thinner than No. 28, 2c % B advance.  Metal is width ½ in. to ½, inclusive, not thinner than No. 25, 2c % B advance.  Metal is width ½ in. to ½, thinner than No. 28, 5c % B advance.  Metal, in. in width and leas, 10c % B advance.  Ang of the above widths cut to particular lengths, add 7c % B OERMAN SILVER MARKET METAL AND WIRE.  Market Metal. Wire  4 for cent., 12 linch to No. 26, 5c % 5c 5c % 6c	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Planets or Gold Retai  Planed or Polished  Fon SITTING.  Metal, in width 1 in. to 36 in. to No. 28, inclusive, 10 \$\psi\$ as advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\psi\$ advance.  Metal, in width 1 in. to 36 in. thinner than No. 28, 20 \$\psi\$ advance.  Metal in width 5 in. to 36 in. thinner than No. 28, 20 \$\psi\$ advance.  Metal in width 5 in. to 36 thinner than No. 28, 20 \$\psi\$ advance.  Metal in width 5 in. to 36 thinner than No. 28, 20 \$\psi\$ advance.  Another width 5 in. to 36 thinner than No. 28, 20 \$\psi\$ advance.  Any of the above widths cut to particular longths, add  70 \$\psi\$.  Market Metal. Wire  4 for cent., 12 linch to No. 26. \$\psi\$.  Market Motal. Wire  4 for cent., 12 linch to No. 26. \$\psi\$.  10 \$\psi\$.  11 \$\psi\$.  12 \$\psi\$.  13 \$\psi\$.  14 \$\psi\$.  15 \$\psi\$.  16 \$\psi\$.  17 \$\psi\$.  18 \$\psi\$.  18 \$\psi\$.  19 \$\psi\$.  10 \$	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Planets or Gold Retai  Planed or Polished  Fon SITTING.  Metal, in width 1 in. to 36 in. to No. 28, inclusive, 10 \$\psi\$ as advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\psi\$ advance.  Metal, in width 1 in. to 36 in. thinner than No. 28, 20 \$\psi\$ advance.  Metal in width 5 in. to 36 in. thinner than No. 28, 20 \$\psi\$ advance.  Metal in width 5 in. to 36 thinner than No. 28, 20 \$\psi\$ advance.  Metal in width 5 in. to 36 thinner than No. 28, 20 \$\psi\$ advance.  Another width 5 in. to 36 thinner than No. 28, 20 \$\psi\$ advance.  Any of the above widths cut to particular longths, add  70 \$\psi\$.  Market Metal. Wire  4 for cent., 12 linch to No. 26. \$\psi\$.  Market Motal. Wire  4 for cent., 12 linch to No. 26. \$\psi\$.  10 \$\psi\$.  11 \$\psi\$.  12 \$\psi\$.  13 \$\psi\$.  14 \$\psi\$.  15 \$\psi\$.  16 \$\psi\$.  17 \$\psi\$.  18 \$\psi\$.  18 \$\psi\$.  19 \$\psi\$.  10 \$	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Pianers or Gold Retail Framed or Folished	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Planers or Gold Retail   Planed or Polished   540   Polished   540   Polished   540   Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\pi\$ nadvance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\pi\$ nadvance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\pi\$ nadvance.  Metal, in width 16 in. to 16 in. thinner than No. 28, 20 \$\pi\$ nadvance.  Metal, in width 16 in. to 16 thinner than No. 28, 50 \$\pi\$ nadvance.  Metal, in width 16 in. to 16 thinner than No. 28, 50 \$\pi\$ nadvance.  Metal, in width and leas, 100 \$\pi\$ nadvance.  Metal, in in width and leas, 100 \$\pi\$ nadvance.  Metal, in width and leas, 100 \$\pi\$ nadvance.  Meral, in width 16 in. to 16 thinner than No. 28, 50 \$\pi\$ nadvance.  Meral, in width 26 in. to 16 thinner than No. 28, 50 \$\pi\$ no error name of the name of th	Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Black Frusslan, fair to best, in oil. Black Frusslan, fair to best, in oil.
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Blue Ditramarine.  Brown, Annuslan, Blue Ditramarine.  Brown, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Fron Paint, Bright Red  Iron Paint, Purple.  Iron Paint, Ground in oil, Bright Iron Paint, Ground in oil, Brown, in on paint, Ground in oil, Brown, incon paint, Ground in oil, Brown, incon paint, Ground in oil, Brown, incon paint, Ground in oil, Purple.  Mineral Paints  Orange Mineral.  Red Venetian (Eng., dry
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Blue Ditramarine.  Brown, Annuslan, Blue Ditramarine.  Brown, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Fron Paint, Bright Red  Iron Paint, Purple.  Iron Paint, Ground in oil, Bright Iron Paint, Ground in oil, Brown, in on paint, Ground in oil, Brown, incon paint, Ground in oil, Brown, incon paint, Ground in oil, Brown, incon paint, Ground in oil, Purple.  Mineral Paints  Orange Mineral.  Red Venetian (Eng., dry
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Blue Ditramarine.  Brown, Annuslan, Blue Ditramarine.  Brown, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Fron Paint, Bright Red  Iron Paint, Purple.  Iron Paint, Ground in oil, Bright Iron Paint, Ground in oil, Brown, in on paint, Ground in oil, Brown, incon paint, Ground in oil, Brown, incon paint, Ground in oil, Brown, incon paint, Ground in oil, Purple.  Mineral Paints  Orange Mineral.  Red Venetian (Eng., dry
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Paint, in oil. Brown, Annual. Brown, Van Dyko. Green, Chrome, in oil. Green, Paris, in oil. Brown, Paint, Brown, In oil. Brown, Paint, Brown, In oil. Brown, Paint, Bround in oil, Brown, Iron Paint, Ground in oil, Purple. Black Lamp, Coach Paints, Ground in oil, Purple. Brown, Iron, Ir
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Paint, in oil. Brown, Annual. Brown, Van Dyko. Green, Chrome, in oil. Green, Paris, in oil. Brown, Paint, Brown, In oil. Brown, Paint, Brown, In oil. Brown, Paint, Bround in oil, Brown, Iron Paint, Ground in oil, Purple. Black Lamp, Coach Paints, Ground in oil, Purple. Brown, Iron, Ir
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Paint, in oil. Brown, Annual. Brown, Van Dyko. Green, Chrome, in oil. Green, Paris, in oil. Brown, Paint, Brown, In oil. Brown, Paint, Brown, In oil. Brown, Paint, Bround in oil, Brown, Iron Paint, Ground in oil, Purple. Black Lamp, Coach Paints, Ground in oil, Purple. Brown, Iron, Ir
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Paint, in oil. Brown, Annual. Brown, Van Dyko. Green, Chrome, in oil. Green, Paris, in oil. Brown, Paint, Brown, In oil. Brown, Paint, Brown, In oil. Brown, Paint, Bround in oil, Brown, Iron Paint, Ground in oil, Purple. Black Lamp, Coach Paints, Ground in oil, Purple. Brown, Iron, Ir
Planers or Gold Retal   Planed or Polished   540   Polished   540   Metal, in width 1 in. to 16 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ and vance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 16 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 16 in. to 16 inclusive, not thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width 36 in. to 16 thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Metal, in width and leas, 100 \$\mathbb{P}\$ advance.  Any of the above widths cut to particular longths, add 70 \$\mathbb{P}\$.  Market Motal. Wire 4 per cent., 12 inch to No. 26. \$\mathbb{P}\$ 3-70 \$\mathbb{O}\$ 10 \$\mathred{O}\$ 10 \$\mathre	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Paint, in oil. Brown, Annual. Brown, Van Dyko. Green, Chrome, in oil. Green, Paris, in oil. Brown, Paint, Brown, In oil. Brown, Paint, Brown, In oil. Brown, Paint, Bround in oil, Brown, Iron Paint, Ground in oil, Purple. Black Lamp, Coach Paints, Ground in oil, Purple. Brown, Iron, Ir
Planed or Polished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters, Black Lamp, Ordinary, Black Lamp, Ordinary, Black Lamp, Ordinary, Black Ivory Drop, fair, Black Ivory Drop, fair, Black Ivory Drop, best, Black Paint, in oil. kegs Blue Prussian, fair to best, in oil. Blue Chinese dry, Blue Ultramarine. Brown, Spanish. Brown, Ch. Dyko, Chen, Ch. Dyko, Ch.
Planets's or Gold Retal  Planed or Polished  Sac  For SILTTING.  Metal, in width i in. to ½ in. to No. 28, inclusive, 10 \$\mathbb{P}\$ advance.  Retal, in width i in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Retal, in width i in. to ½ in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Retal, in width i in. to ½ in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width i in. to ½ in. thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is in width adles, toc \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 26. \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 28. \$\mathbb{P}\$ \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 28. \$\mathbb{P}\$ \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 28. \$\mathbb{P}\$	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters, Black Lamp, Ordinary, Black Lamp, Ordinary, Black Lamp, Ordinary, Black Ivory Drop, fair, Black Ivory Drop, fair, Black Ivory Drop, best, Black Paint, in oil. kegs Blue Prussian, fair to best, in oil. Blue Chinese dry, Blue Ultramarine. Brown, Spanish. Brown, Ch. Dyko, Chen, Ch. Dyko, Ch.
Planets's or Gold Retal  Planed or Polished  Sac  For SILTTING.  Metal, in width i in. to ½ in. to No. 28, inclusive, 10 \$\mathbb{P}\$ advance.  Retal, in width i in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Retal, in width i in. to ½ in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Retal, in width i in. to ½ in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width i in. to ½ in. thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is width i ½ in. to ½ thinner than No. 28, 50 \$\mathbb{P}\$ advance.  Metal, is in width adles, toc \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 26. \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 28. \$\mathbb{P}\$ \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 28. \$\mathbb{P}\$ \$\mathbb{P}\$ advance.  Metal, is width i in. 50 \$\mathbb{P}\$ thin to No. 28. \$\mathbb{P}\$	Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. Brown, Van Dyke. Green, Chrome. Green, Chrome. Green, Chrome. Green, Paris, in oil. Green, Paris, in oil. Brown, Van Dyke. Green, Chrome. Green, Paris, in oil. Brown, Van Dyke. Green, Chrome. Green, Paris, in oil. Brown, In Ground in oil, Eright F. Iron Paint, Ground in oil, Eright F. Iron Paint, Ground in oil, Brown, in oil. Brown, Iron Paint, Ground in oil, Eright F. Iro
Planets' or Gold Retal  Planed or Polished  Soc Pos RITTING.  Metal, in width 1 in. to 1/2 in. to No. 28, inclusive, 10 W B advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 W B advance.  Metal, in with 1 in. to 1/2 in. thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 in. thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 in. thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 2/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 2/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 2/2 in. to 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than No. 26 is Platers', at 50. W B additional.  German Silver Sorap, one-half less than net price of 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 26 is Platers', at 50. W B additional.  German Silver Sorap, one-half less than net price of 1/2 thinner than 1/2 thinner th	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Brown, Yan Dyko.  Green, Chrome, in oil.  Green, Paris, in oil.  Brown, In Ground in oil, Bright in on Paint, Ground in oil, Brown, in oil.  Brown, In Green, in oil.  Green, Chrome, in oil.  Green, Paris, in oil.  Brown, In Green, Chrome, in oil.  Brown, In Green, In oil.  Stenna, American, Raw  Stenna, Burnt, in oil.  Stenna, Burnt, in oil.  Stenna, Eaw, Unber, Burnt, in oil.  Stenna, Raw, Unber, Burnt, in oil.  White, Faris, English, prime, Vermillon, Trieste.  Vermillon, T
Planets' or Gold Retal  Planed or Polished  Soc Pos RITTING.  Metal, in width 1 in. to 1/2 in. to No. 28, inclusive, 10 W B advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 W B advance.  Metal, in with 1 in. to 1/2 in. thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 in. thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 in. thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 1/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 2/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 2/2 in. to 1/2 thinner than No. 28, 20 W B advance.  Metal in width 2/2 in. to 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than No. 26 is Platers', at 50. W B additional.  German Silver Sorap, one-half less than net price of 1/2 thinner than 1/2 thinner than No. 26 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than 1/2 thinner than No. 27 to 1/2 thinner than 1/2 thinner than No. 26 is Platers', at 50. W B additional.  German Silver Sorap, one-half less than net price of 1/2 thinner than 1/2 thinner th	Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil. Black Paint, Ground in oil. Brown, Yan Dyke. Green, Chrome. Green, Chrome. Green, Paris, in oil. Brown, Paint, Bright Red. Iron Paint, Bright Red. Iron Paint, Ground in oil, Bright Florn Paint, Ground in oil, Bright Florn Paint, Ground in oil, Brown, Iron Paint, Ground in oil, Iron Paint, G
Pinters' or Gold Richal  Printed or Polished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Ivory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Brown, Van Dyke.  Green, Chrome, in oil.  Green, Paris, in oil.  Brown, Internation, Ground in oil, Bright in on Paint, Ground in oil, Bright in on Paint, Ground in oil, Brown, in oil will painter in oil.  Brown, Van Dyke.  Stenna, American, Raw  Stenna, Burnt, in oil.  Stenna, Burnt, in oil.  Stenna, Raw.  Umber, Burnt, in oil.  Umber, Burnt, in oil.  Umber, Burnt, in oil.  White, Faris, Epglish, prime, Vermillon, Trieste.  Vermillon
Pinters' or Gold Richal  Printed or Polished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Ivory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Brown, Van Dyke.  Green, Chrome, in oil.  Green, Paris, in oil.  Brown, Internation, Ground in oil, Bright in on Paint, Ground in oil, Bright in on Paint, Ground in oil, Brown, in oil will painter in oil.  Brown, Van Dyke.  Stenna, American, Raw  Stenna, Burnt, in oil.  Stenna, Burnt, in oil.  Stenna, Raw.  Umber, Burnt, in oil.  Umber, Burnt, in oil.  Umber, Burnt, in oil.  White, Faris, Epglish, prime, Vermillon, Trieste.  Vermillon
Pinters or Gold Retal  Printed or Polished  For Striffson  Metal, in width 1 in. to 1/2 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 2 in. to 1/2 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 1/2 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 2/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ and price of 20 \$\mathbb{P}\$ and chips, half the price of 20 \$\mathbb{P}\$ and 21 \$\mathbb{P}\$ and 22 \$\mathbb{P}\$ and 21 \$\mathbb{P}\$ and 22 \$\mathbb{P}\$ and 23 \$\mathbb{P}\$ and 24 \$\mathbb{P}\$ and 25 \$\math	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Ivory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Kegs Black Paint, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Chrome, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Green, Paris, in oil.  Brown, Van Dyke.  Green, Chrome, in oil.  Green, Paris, in oil.  Brown, Internation, Ground in oil, Bright in on Paint, Ground in oil, Bright in on Paint, Ground in oil, Brown, in oil will painter in oil.  Brown, Van Dyke.  Stenna, American, Raw  Stenna, Burnt, in oil.  Stenna, Burnt, in oil.  Stenna, Raw.  Umber, Burnt, in oil.  Umber, Burnt, in oil.  Umber, Burnt, in oil.  White, Faris, Epglish, prime, Vermillon, Trieste.  Vermillon
Pinters or Gold Retal  Printed or Polished  For Striffson  Metal, in width 1 in. to 1/2 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 2 in. to 1/2 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 1/2 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 2/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ and price of 20 \$\mathbb{P}\$ and chips, half the price of 20 \$\mathbb{P}\$ and 21 \$\mathbb{P}\$ and 22 \$\mathbb{P}\$ and 21 \$\mathbb{P}\$ and 22 \$\mathbb{P}\$ and 23 \$\mathbb{P}\$ and 24 \$\mathbb{P}\$ and 25 \$\math	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lyory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil.  Eliack Paint, in oil.  Erowa, Spanish.  Brown, Van Dyko.  Green, Chrome.  Green, Chrome.  Green, Chrome.  Green, Chrome.  Green, Paris, in oil.  Green, Paris, in oil.  Eliack Paint, Ground in oil, Eright in on Paint, Ground in oil, Eright in oil and the paint in oil.  Eliack Paint, in oil.  Eliack Pai
Pinters or Gold Retal  Printed or Polished  For Striffson  Metal, in width 1 in. to 1/2 in. to No. 28, inclusive, 10 \$\mathbb{P}\$ advance.  Metal, in width 2 in. to 1 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 2 in. to 1/2 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1 in. to 1/2 in. thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 3/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 1/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ advance.  Metal, in width 2/2 in. to 1/2 thinner than No. 28, 20 \$\mathbb{P}\$ and price of 20 \$\mathbb{P}\$ and chips, half the price of 20 \$\mathbb{P}\$ and 21 \$\mathbb{P}\$ and 22 \$\mathbb{P}\$ and 21 \$\mathbb{P}\$ and 22 \$\mathbb{P}\$ and 23 \$\mathbb{P}\$ and 24 \$\mathbb{P}\$ and 25 \$\math	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Lory Drop, fair. Black Ivory Drop, fair. Black Paint, in oil. Blue Chinese dry. Black Paint, in oil. Blue Prussian, fair to best, in oil. Blue Prussian, fair to best, in oil. Blue Prussian, fair to best, in oil. Blue Chinese dry. Brown, Spanish. Brown, Van Dyke. Green, Chrome, in oil. Green, Paris, in oil. Brown Paint, Bright Red. Iron Paint, Bround in oil, Bright Red. Iron Paint, Ground In oil, Bright Red. Iron Paint, Iron Red. Iron Paint, Ground In oil, Bright Red. Iron Paint, Iron Red. Iron Paint, Iron Red. Iron Paint, Iron Red. Iron Pain
Pinned or Polished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters, Black Lamp, Ordinary, Black Lamp, Ordinary, Black Ivory Drop, fair, Black Ivory Drop, fair, Black Paint, in oil. Kegs Black Paint, Broth, The Black Paint, Brown, Chrome, Green, Chrome, Green, Chrome, Green, Chrome, In oil Green, Paints, Brown, In oil Green, Paint, Brown, In oil Green, Paint, Brown, In oil Green, Paint, Brown, In oil Hown, Brown, In oil Hown, Brown, In oil Hown, Brown, Brow
Figured or Folished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters, Black Lamp, Ordinary, Black Lamp, Ordinary, Black Ivory Drop, fair, Black Ivory Drop, fair, Black Paint, in oil. Kegs Black Paint, Broth, The Black Paint, Brown, Chrome, Green, Chrome, Green, Chrome, Green, Chrome, In oil Green, Paints, Brown, In oil Green, Paint, Brown, In oil Green, Paint, Brown, In oil Green, Paint, Brown, In oil Hown, Brown, In oil Hown, Brown, In oil Hown, Brown, Brow
Pinned or Polished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Paints, Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Ivory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, best. Black Paint, in oil. State Paint, in oil. Black Paint, in oil. Blue Prussian, fair to best, in oil. Blue Prussian, fair to best, in oil. Blue Prussian, fair to best, in oil. Blue Ditramartine. Brown, Yan Dyke. Green, Chrome, in oil. Green, Paris, in oil. Green, Paris, in oil. Iron Paint, Bruple. In oil. Green, Paris, in oil. Iron Paint, Bruple. Iron Paint, Bruple. Iron Paint, Ground in oil, Eright E. Ton Paint, Ground in oil, Eright In on Paint, Ground in oil, Eright In oil Canber, Eaw Umber, Burnt, in oil Stenna, Barnt, in oil Stenna, Burnt, in oil Canber, Eaw Umber, Eurnt, Umber, Eawnt, in oil Canber, Faw, in oil Vermilion, English, prime Land, American, Durch In oil Vermilion, Chinese. Vermilion, English, prime Yellow Chre, French, in oil asst' Yellow Chre, French, in oil
Pinned or Polished	Paints, Oils  Paints, Oils  Paints, Oils  Paints, Oils  Black Lamp, Coach Painters. Black Lamp, Ordinary. Black Lamp, Ordinary. Black Ivory Drop, fair. Black Ivory Brop, fair. Black Ivory Drop, fair. Black Ivory Drop, fair. Black Ivory Drop, fair. Blue Prusslan, fair to best, in oil. Blue Prusslan, fair to best, in oil. Brown, Yan Dyke. Green, Chrome, in oil. Green, Chrome, in oil. Green, Paris, in oil. Brown, Ivon Paint, Brown. Iron Paint, Ground in oil, Bright Iron Paint, Ground in oil, Brown. Iron Paint, Ground in oil, Bright Iron Paint, Ground in oil, Brown. Iron Paint, Ground in oil, Brown. Iron Paint, Ground in oil, Brown. Iron Paint, Ground in oil, Bright Iron Paint, Ground in oil, Brown. Iron Paint, Ground in oil, Brown. Bieneal Faint, Ground in oil, Brown. Bieneal Faint, Ground in oil, Brown. Bed Venetian, Eng. dry Red Venetian, Eng. dry Red Venetian, Eng. dry Red Venetian, Burnt, Blenna, Burn

DLESALE PRICE	S,	
All Mandrel Drawn Tubes under % in. 2 cg pound advance. Zinc TUBING—dis. 25 %. Fancy. French and Extra Patterns. Percon GERMAN SILVER TWEING.—dis 10 %		
4 Per cent.  5 Per cent.  9 Per cent.  9 Per cent.  10 Per cent.  11 Per cent.  12 Per cent.  13 Per cent.  14 Per cent.  15 Per cent.  16 Per cent.  17 Per cent.  18 Per cent.  19 Per cent.  19 Per cent.  10 Per		
English Steel.  Best Cast.  Extra Cast.	D 15160	
Swaged, Cast.  Best Double Shear.  Blister: ist quality.  German Steel, Best.  2d quality.  3d quality.  3d quality.  3d quality.  3d quality.  3d quality.  ANTIMONY.  LEAD—DTTY: Pig, \$2.\(\pi\) io B Old Load,  Pipe and Sheet, 2\(\pi\) (0.\(\pi\) B.  American.	D 1516C D 1416C D 1216C le Report;	
Bar	7c. net 4c, dis 10 % 5c, dis 10 % 8c, dis 10 % 1, Buck, 8c	A GO Che care care ma no
N. P. U. BABBITT METAL.  A. 250; B. 200; C. 14.  Ti N. DUTY: Plates, Sheets, Tagger and T.  \$\vert\{\pi}\$ \$\vert\{\pi}\$; Electro-galvanized Plates, \$2\vert\{\pi}\$ \$\vert\{\pi}\$; tures of, not conumerated, \$3\vert\{\pi}\$ per cost. \$4\vert\$ Block and Figs free. Banca, subject to our control of the control o	25 1/4 @ 260 25 1/4 @ 260	2 20 20 20
I C 1432   PrimeCharcoal	8.25 @ 8.50 @ 8.75 @ 6.25 & 8.25	ı
I C 10X14 (	@ 5.25 @ @ 11.00	
1. 20x29.   15.50	75 @ 8.00 15 C	
Paper Stock, &c.	1	2000
White Shirt Cuttings, No. 1. 7 White Shirt Cuttings, No. 2. 5 Mill Assorted Whites. 5 Mill Assorted Whites. 5 Unbleached Muslins. 5 City Whites, No. 1. 45 New Canton Flannels. 6 New Seconds, Hght. 33 New Canton Flannels. 6 No. 2 Whites. 32 Cotton Canvas. 4 Linen Canvas, No. 1. 4 Seconds, City No. 1. 13 Seconds, City No. 2. 13 Seconds, City No. 2. 13 Manila Rope. 33 Manila Rope. 37 Manila Rope. 4 Manila Rope. 37 Manila Rope. 4 Manila Rope. 37 Manila Rope. 4 Manila Rope. 37 M	nts 7 % (V	1
Paints, Oils, &c.	₩ 15 200	
Black Ivory Drop, fail. Black Ivory Drop, fail. Black Ivory Drop, fail. Black Faint, in oil	12 @ 150 12 @ 150 12 @ 150 13 6 550 15 @ 550 17 00 18 @ 300 10 @ 120 15 @ 230 16 @ 250 16 @ 250 17 00 18 @ 250	
Green, Paris, in oil good, 30c; biron Palat, Bright Red.  ron Palnt, Brown ron Palnt, Brown ron Palnt, Brown ron Palnt, Purple.  ron Palnt, Ground in oil, Bright Red.  ron Palnt, Ground in oil, Red.  ron Palnt, Ground in oil, Brown stron Palnt, Ground in oil, Purple.  Wineral Palnts.  ronange Mineral.  Red Lead, American.  Red Venetian (Eng. dry. asst'd cans, 110; k  Red Indian dry.	est, 45c   m 2 4c   m 2 4c   m 1 3 c   m 1 3 c   m 1 5 c	The state of the s
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Paints, Oils, &c.  Paints. Black Lamp, Coach Painters Black Lamp, Ordinary Black Lamp, Ordina	150 1750 1750 1800 18175 18175 18185 18175 18185 18175 18185 18175 18185	
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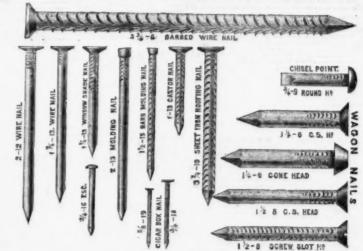
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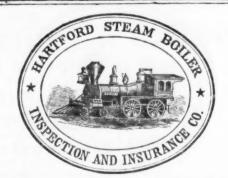
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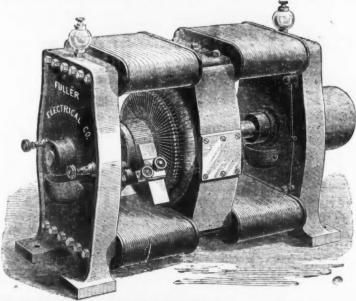
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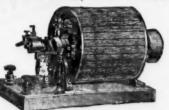
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WORKS AT DANVILLE, PA. PIG IRON, T AND STREET RAILS,

W. E. C. COXE, President, Reading, Pa.

#### THE SIEMENS-ANDERSON STEEL CO., Successors to ANDERSON & CO.,

Crucible Tool, Cast Spring, Cast Plow, Iron Centre,

Soft Centre, and Iron Back Plow, also Open Hearth Spring, Tire, Plow, Machinery, and

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ROUNDS, AND SQUARES, Steel for Agricultural and other Purposes.

UNIVERSAL MILL PLATES Of Steel and Iron, up to 30 inches wide, and of any desired thickness and length.

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Manufacturers of TOOL, MACHINERY, T

Warranted equal to any made.

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CLEVELAND IRON ORE PAINT COMPANY, BEST

PURE IRON ORE PAINTS, Red (Rossie) Purple and Brown. We guarantee all our Paints, and respect-tully solidit the patronage of consumers and dealers. Send for Frice List 22. Office, 79 Columbus St., Cleveland, O.

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having shows their great popularity and superiority.

There never was a Spring made that is so durable, uniform pressure, holding the door tight when closed, and allowing it to open without increasing the pressure at any point.

When the door is opened about 130 degrees of a circle, it will press and hold it open The Spring is easily unhooked and remoked—in an instant—from the door and also from the jamb, without removing a screw or pin.

This is a Convenience Possessed by no other Spring in the Market.

We are making this season three sizes, viz: No. 1 For Screen or Light Storm Doors.

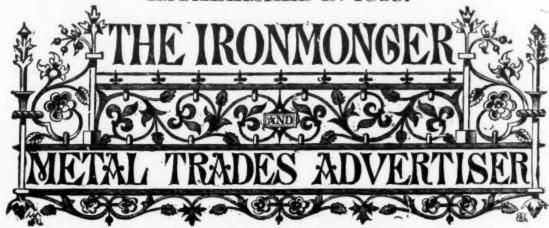
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FREEPORT, ILLINOIS.

ESTABLISHED IN 1859.



PUBLISHED EVERY SATURDAY.

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is published every fourth next twelve months will be as follows:
FERUARY 25, MACCH 25, APRIL 22, MAY 20, JUNE 17, JULY 8, AUGUST 5, SEPTEMBER 2 and 30, OCTOBER 28, NOVEMBER 25, DECEMBER 33, 1883, and JANUARY 20, 1883. This Supplement is published in

#### FOUR LEADING COMMERCIAL LANGUAGES

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so far as our experience of twenty years is concerned, will be covered by The Formon Sprplanmer at east twice a year. Thus a Price List or Advert at ment inserted in the hommoness and Formon Supplanment is a strikingly powerful and most efficient way of publicity not to be compared with any of the opposite of communication.

# HENRY DISSTON & SONS,

KEYSTONE SAW, TOOL, STEEL & FILE WORKS,

Front and Laurel Streets,

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DISSTON'S SAMSON TREE PLANTER AND POST HOLE DIGGER.



Price, - - \$37.50 per dozen.

No Farmer, Nurseryman, Railroad or Telegraph Company

SHOULD BE WITHOUT ONE.

NO BACK-ACHE.

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This tool has been thoroughly tested, and has given the greatest satisfaction to all who have tried it. The principle on which it works makes it self-cleaning and prevents adhesion in sticky soil; therefore it always works free and easy. It is far superior to all plungers, augers and boring machines, as it works well in stony, sandy, or clay soils; quicksand under water is as easily removed as though no water existed.



Plunge the Digger into the ground, as shown in cut, Fig. 1, and when the soil is loosened pull out the lever with one hand, as shown in cut, Fig. 2, which will press the dirt between the blades; then draw the Digger from the hole, keeping hold of the lever with one hand and the handle with the other. When the Digger is clear of the hole, you can deposit the load anywhere within reach by simply pressing down the lever, which will open the blades and the dirt will fall from between them. The Digger is then ready for another plunge. The steel blades are nine inches long, and the whole tool five feet long. For sale at Hardware and Agricultural Stores.

HENRY DISSTON & SONS.

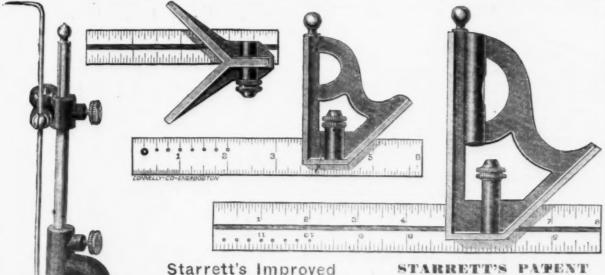
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Hardware Manufacturers' Agents, and Headquarters for

## HORSE SHOES, HORSE NAILS, TOE CALKS, CALKING STEEL,

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SURFACE GAUGE

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Can be quickly and accurately adjusted to lay out work for every conceivable purpose a gauge is used for.

Includes Mitre, Plumb and Level, also the best Centre Square made. One is a complete substitute for a full set of the old style squares, and warranted accurate.

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Send for Catalogue.

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#### CAUTION.

This is to inform the public that since the success of my Patent Squares has become known, unprincipled parties have had the foolbardiness to make them, under the Pretext of Chaplin's Patent. Having commenced suit against said parties, I shall soon put a stop to their manufacture, and shall hold all selling or using them responsible.

Respectfully.

L. S. STARRETT.

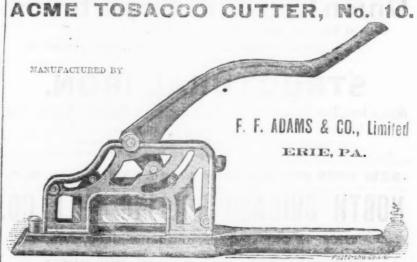
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Manufacturers of

ROTARY KNIFE PEACH PARIES. GOLD MEDAL APPLE PARERS, SAFETY REVERSIBLE ICE CREEPERS, EGG BEATERS, MELTING LADLES. &c. Also, Scott's Peach-Pitting Machines.







## Amesbury's Band Saw Filing Machine.



Will Save its Cost in a Few Weeks.

Any boy that can turn a crank can file a band saw in from five to ten minutes more accurately than an expert filer can do the same by hand in one hour. Keeps the teeth even and level, and enables the saw to do more and better work with much less strain. Pronounce i by users to be the best lator-saving machine ever introduced.

First Premium and Diploma of St Louis Assicultural and Mechanical Association, 1881, awarded for

3EST BAND SAW FILING MACHINE.

Is sold at a puber within the reach of very one using a band saw. Reduced rice List.—Net price, including a files, 32 i thin, corner and tracing files, per czen, \$1.50. Terms strictly cash.

Send for Catalogue and Testimonials.

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HENRY'S PATENT UNIVERSAL CAN OPENER.



The verdict of all: "The best in the market."

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Steel Toe Calk.

FINISHED READY FOR NAILING ON.

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The Best and Cheapest Shoe Made.

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HAIGHT & CLARK, 16 & 18 De Witt St., Albany, H. Y.

FINE GRAV IRON CASTINGS (IN EVERY DESCRIPTION,

Rosettes and Pickets for Wire Warkers, Castings for Forniture and Pickets

Manufacturers, Iron and Met of Patterns of all kinds a pecialty.

Correspondence solicited for all kinds of castings.

PURE TURKISH EMERY, Quartz, Pumice and Rotten Stone, Crocus, Rouge, Glue, Sand

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Presses, Dies and Tools for Working Sheet Metal,

Works. 147 and 149 Elm Street, near Clinton Street. BUFFALO, N. Y.

Please notice that we have removed from No. 295 THIRD AVENUE to
No. 37 Warren Street, near Church St.,
When we hope to be favored with a continuous of your generous papronage.

J. M. FARRINGTON & CO.,

Successors to DAY, FASE NOTION & CO., Manufacturers of LOCKS. KNOBS. FASE NOTIONS, B. A. W. Wrought Store Door and Fluch Bolts, Silver Plated, Ornamental Bronze and other Hardware

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Corrected Weekly by Lloyd, Supplee & Walton.) Terms, 30 days. For 60 or 90 days, Interest added at to	Serews. Fine Hoad Iron Braco. Round Head Brass. Fron Spoons.
per cent, per annum.	Plated German Silver Britannia, Boardman's
Anvila.  Peter Wrights, & B	Tinned
Apple Parers. \$6.50 Penn Apple Parer	Parker's Tinned Tinned Torrey Philadelphia; in., 85.00; 8 in., 87.75 @ Chafflet. No. 1, 82.75; 2, 82.25; 3, 80.00 @ Gent Cost No. 7, large Jap'd et dox No. 7, Medium Jap'd No. 8 mail Jap'd Stocks and Dies Stove Polish Gen Dixon Onvx
· control	No. 2, Medium Jap'd " No. small Jap'd " Stocks and Dies.
Hunt's Kentucky and Yankee, per doz \$10.0 % 10.50 Mann's Rea Warrior. "9.50 % 10.50 Richland Chief. "9.50 % 10.50 Reveled Axes. adu 50 net Double Bit Axes. adu 50 50.50	Dixon
Augera and Auger Bits New List January I	Shoe Nails-4 8, 15gc.; 3/6-8, 100 V D Double Pointed Tacks.
Cook's Augers. dis jok to 5 Watrous' Ship Augers dis 18 Reniamin Pierce Auger Bits dis 5	Genuine Oneida—Newhouse Im. Oneida—Newhouse list, first qual
Rates' Nut Augers dis pactor Coo't's Augers dis pactor Watrous' Ship Augers dis pactor Renjamin Pierce Auger Bits dis pactor Cook's dispactor C	Traps. Genuine Oneida—Newhouse Ist, first qual. Views.—Solid fox Treaton new list. Wrenches.—Agricultural. Coes' Genuine. " Mechanics' di a " Mall Bar Philada, Tool Co., Duplex.
Bonney's Pat. Hol. Augers, list \$48 \( \) dozdis 20\( \) Stearns' Pat. Hol. Augers, list \$48 \( \) dozdis 20\( \) Halances. Light and Common	" Mail. Bar Philada. Tool Co., Duplex
49 - 18	Bright or Ann'd, No. o to 18
Bovin Bros. Mfg. Co. Livit Hand Pells	Tinned Broom Wiredi
Bolt and Hivet Clippers. Chambers' No. 1. for % bolt. each, \$7.50 "No. 2, * 14 " " 9.00 dis 15 %	Guvanizad No. 7 to 18. Market List, di Wrinzers, 246. Peerless No. 246. 2 Universal, No. 246. Novelty, No. 10.
Borley Machines.	Universal, No. 2/6 Novelty, No. 10
Angular, without Augers	2
Stanley, Wrought Shutter. dis 50210 %  Braces.—Barber's dis 4285 5	PITTSBURGH.
Horing Machines.  Upright, without Augurs.  Upright, without Augurs.  Holis.—Eastern Carriage Boits.  Holis.—Eastern Carriage	Merchant Iron. TERMSNote or acceptance at 60 days, w
Rutts.—Cast Fast Joint, Narrow	rate of exchange on New York, or a disco- cent, for cash, if remitted within 10 days f involce
American Ball   dis 5, 2   Brits - Cast Fast Joint, Narrow   dis 4,9710 \$   dis 5,9710 \$   dis	For fluctuations and di-
Wrought Loose Pin	burgh Trade Report. The Clowing are card rates.
" Loose Joint	Flat Bar.
	1 to 1 by 36 to 1 inch
Towns Halten and Call Heavy	Jounds and Squares.
1837. dls 35 7 Galvanized Pump. dls 35 7 Galvanized Pump. best Galvanized Pump. best Galvanized Pump. best Galvanized Pump.	1 0 174
Chirms	\$4 to \$4
Casters.—Bed (new list July 1, 1880,)	
Casters,—Bed thew list July 1, 1880, dls 5,870 5 Plate dls 3,870 6 Coffee Mills,—Box and Side, new list Jan. 1, 1880 dls 157 Enterprise dls 157 Cuttery,—Walden Pocket new list net Landers, Frany & Clark, J. Russell & Co., Lamen & Goodnow Mfg. Co. and Meriden Cutlery Co., Manu-	Herse Shoe. % to 1½ by 5-16 to 74 inch. Wagon Boz Iron. 74 Inch. Nos. 13 and 14.
Landers, Frary & Clark, J. Russell & Co., Lamson & Goodnow Mfg. Co. and Meriden Cutlery Co., Manu- facturers' prices net.	
Drawing Knives.  Hart Mig. Co.'s	11 and 12
Fry Paus. Tinned	alita 6 by 10 and c. 16 ly ab
	\$ to 34 by 54 and 5-16
Burnished	
Nicholson	1 to 198 by 180 -915 1 to 198 by 898 it and 12. 75 and 199 by 15 199 16 5 and 199 by 15 199 16 6 and 199 by Nos. Hand 12 6 by and 99 by Nos. Hand 12 6 by 180 by 180 16 6
Address and the contract of th	a and comby to to 2 16
Earle 1 (in. roll each, \$2.15   dis 25 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ba inch by Nos. 11 and 12
Crown-4/s (s. reil	A A DIT OF AT THE ROY BY MARKE ADVANCED ASSESSMENT OF THE PARTY OF THE
Yerkes & Plumb's, new listdis 30 %	1'3 to 2, No. 21,
Handles. Boynton's Pat. Saw Handles. 35c per pair net.	15-16, 1, and 1%, Nos. 13, 14 and 18
Runtdis 20 1	15-16, 1, and 156, No. 21
Hinges. Strap and Tdis 40%10%10 5	74, Nos. 19, 140d 15, 74, 100s, 10, 17, and 15, 75, Nos. 19, 17 and 18, 75, Nos. 19 and 20, 25, No. 21
Ausable 30 27 28 24 23 22 Pol'ed & P't'd and Blued and Poleted, 31 28 2 28 24 24 25 Clobe New list, 31 28 26 25 24 33	13-16, Nos. 13. 14 and 15
Clinton 23 20 19 18 17 Polished & Pointed 23 21 20 19 18	7 13-19, NO 21 13-15, NO. 22
Descent on Ausable, 30%; Clinton, 20%; Globe, 10%	91, Nos. 16, 17 and 18 91, Nos. 19 and 20.
Branford dis 40%2 s Gavlerd Cabhret dis 24%2 s eash American Padlocks dis 40 & 2 c eash Seanding van Padlocks	11-10. NOS. 12. 14 BHG 15
American Padlocks	11-10, Nos. 19 and 20. 11-10, No. 21. 11-10, No. 22.
8	6s, Nos. 13, 14 and 16. 6s, Nos. 10, 17 and 18. 6s, Nos. 19 and 20
Square 'andle and Oil	96, No. 21 56, No. 23 56, No. 23
Lawn Nowers, Pennsylvania   newlist   hecklide   dis 30 %	50, No. 22, 12, 14 and 15, 17, No. 24, No. 24, 10, 24, 10, 17 and 15, 17, 10, 10, 17 and 15, 17, 10, 17, 10, 17, 17, 17, 17, 17, 17, 17, 17, 17, 17
1. wu and Garden Pumps. Inhand PatentList \$5.00 dis 10 2	0 10, NO, 22 0-16, NO, 23 6 inch, Nos, 13, 14 and 15
Long and Short Cutternew listo Pennsylvania Patteradis	Nos. 16, 17 and 18. Nos. 19 and 20. No. 21.
Molasses Gates. Futerorise Mig Co's Measuring Faucets. dis 25 % Stebhins' Gates. dis 70%10* Lincoln's dis 50%10 %	116 " No. 13
Lincoln's dis 503 to Landers. Frary & Clark's Petroleum dis 203 to Brass Liquor Cocks, new list Jan. 1 188a. dis 40 Cork Lined dis 203 to 18 70 3	1-100 per lb. extra will be charged for
Cork Lived   "   dis 702	to specified lengths.  Barrel Hoops.  114 to 2 in., cut to length.
Hale's new list, dis 50, 16.82 cash American. dis 25 cash	14 to 2 in. cut to length o to 11 lbs, per set of 6 hoops. 8 lbs, and less than 9 lbs, per set of 6 hoop Less than lbs, per set of 6 hoops.
Enterprise Stuffers	Extras for Culting to Length all Preced All Iron, including Tire
Scioto	No. cand heavier
Pinne Frans.—Ohio Tool Codis 20% 10 9 Butcher's	Vings Sheet from Charcon No. 10 to 14
Butcher E.	No. 15 to 14
Ruies, Stanley Boxwood dis 66% \$10 8 Stanley Pory dis 55% to 5	No. 22 10 24 4.00 5.80 No. 25 & 25 4.00 6.20 No. 27 4.70 6.20 No. 28 5.00 5.10 6.60
	No. 25.  No. 25.  All sheed No. 15 and lighter, over 30 in the stand a lise extra.  Broot's latent Finnished Sheet at quality (A).  See 1.15 & Charcoal Hammer No. 15 & Charcoal Hammer
P doz88.00 10.25 13.75 15.00 16.75 10.5 Lbs 50 100 150 200 250 300	ist quality (A)tolec   2d quality (B)
Steel and Irondis so \$ ; full ease, dis socio ;	Nos. 25 and 26
Diston's Try Squares dis- sythesGolden Gupper, Lamascus Elade, Boxed and Sharpened by Boxed and Cilppa No. 10. Bronzed Blade, Boxed and	Angle Iron.
CHoper No. 5, Painted Red, Boxed and Sharpened Pdoz \$8.00 ne	1 1
Disston's Curcular, Fainet and Rip. dis 20 Disston's Curcular, Carlotton dis 40 Fatent Tooth dis 30 Fatent Tooth dis 30 Champion Tooth dis 30 Boynton's Lightning Cross Cut, new list. dis 20 One Man, all lengths, dis 20 Billet Webs, so inch. dis 20 Billet Webs, so inch.	8 fbs. to the yard 3.te   20 lbs. to the ;
ti band Pand and Rin diagra	and so lb. Hall. the each: so lb., boc each.
Shovels and Spades. Oliver Ames & Sons, new list	3 by 36 and 36 Spikes for 20 and 28-lb. Ra. 2 and 3 by 36 " 12 and 16-lb. " 2 by 5 10 " 8-lb. Rati
Rowland dis 408 to 18 to 25 to 18 to	Fat Rails.—Punched and Counter  For o z by 15 to 55 inch.  1 by 56 and 7-10 inch.  1 th by 25, 7-16 and 15 inch.
Tone.—Arkansas O.i Stone	t 1½ by 28, 7-16 and ½ inch.  Juniata Naii Rods.
Shovels and Spades.   dis 15	Guard fron 74x34x34 and 74x34x34.
Turkey Oil Stone No. 1. * \$ \$ \$1.00 ne Hindostan Oil Stone No. 1. * \$ \$ \$6 \$ 2.20 Stone \$ \$6 \$ 4.20 Stone \$ \$6 \$ 6.100	Dvag Bars Dropper Bars Cylinder and Landside iron
6 [108 d [108]	Pior Hears Don

Г	HE IRON A
203	Sails.  See Pittsburgh 1rade Peport.  Best Quality Refined Cast Sie Square, Flat, Octagon and Round. et al. and 38 to 4 pr. 32 and 48 to 4 pr. 32 and 48 to 5 are 4 pr. 32 and 48 to 5 are 5 are 6 and 08 to 6 pr. 32 and 48 to 5 are 5 pr. 32 inches.  In the fineh.  In the Machinery Steet.  Bee.
mail Japd   dis 1285   5	Ordinary Sizes, % to 2 inch  Round
all Bur dis 2 dis	Best. 2d Qual. 3d Qual. Ope 10 10 10 10 10 10 10 10 10 10 10 10 10
PITTSBURGH. Merchant Iron. o or acceptance at 60 days, with current uge on New York, or a discount of 2 per if remitted within 10 days from date of	Coul and Grantte Wedge. Roiler. Spindle, subject to Machinery classification Trap Spring Steel. Forged Crank Pins and Lathe Spindles. Piston Rods, plain. Torged to shapes. Slide Bars, plain. Torged to shapes. Crucible, Open Beauth or Besseme Boller, Fire-Box and Flue Sheets, not less t
ctuations and discounts rates see weekly Pitts-rade Report.  agare card rates.  Flat Eur.  0 1 inch 25c 0 2 inch 25c 0 2 inch 25c 0 3 i	Boller, Fire-Box and Flue Sheets, not less thick the Kernetters and semi-circulars, when ordere ately. Smoke Stack, to shape. Locomotive Tank Steel.  File Cast Steet.
3.50 \$4.10 9.16. 2.70 2.70 \$4.50 9.16. 2.90 3.00 \$4.0 9.16. 2.90 3.00 \$4.0 9.10 3.50 \$4.0 9.10 3.50 \$4.0 9.10 3.50 \$4.0 9.10 3.50 \$4.0 9.10	square, Rosand, fair Round and Flat Ba then and over Mill Saw, 5-then and over Horse and Shoe Rasp.  Spring Cast Steel.  Spring land Taper, cut to lengths.  Ixis and over Ixis and Ixis over Ixis and Ixis over Ixis and Ixis over Ixis and Ixis over Ixis
Octa   Frm.   3.30   3.40   3.70	s and sxt6 and 32 and 12 g.  Soliu Safe Cast Steel.  Agricultural Implement Cast Steel  Fork and Rake, Crucible.  Horse Bake Steel, cut to lengths, Crucible.  Hoe, Crucible.  Corn Staft Cutter, bevoled  Bevoled Hoe and Shovel Steel in Bars.  Crucible Plow Steel in slabs.  Bessemer and Open Hearth.
13 and 14	spiral and taper, cut to lengths Tire, 3-16 thick and above Tire, 3-16 thick and above Tire, 3-16 thick and above Tire 4-16 thick and above Tire 5-16 thick and tapered Scythe Back Steel. Urain Drill Bars.
\$40 d 5-15 d 5-25 d 5-2	Thrush r Steel.  Teeth Teeth Rolled Hammer Billets TermaFour months; 3 per cent, discount if remitted within 3: days. Rolls and Castings. Furnace, Floor and Straightening Plates. Guide Res. Guide Res. Guide Res.
18. (1 and 12. 44c Hoop Iron. 3. (4 and 14. 3.5c ho, 17 and 18. 3.5c ho, 17 and 18. 3.5c ho, 17 and 18. 3.5c ho, 18. 3.5c	Spindles and coupling boxes.  Sand Rolls and Finlons, large size.  Pipe Mill Castings, main size.  Rolling Mill Castings under 50 lbs.  Spur and level Wheels, large amail.  Pulleys up to 30 inches amail.  Pulleys up to 30 inches.  Engine Castings, light.  heavy.  (Miled E. II.)
\$ 500. 19, 17 and 18. \$66.  \$ Vis. 19 pnd 20. \$70.  \$ Vis. 2 \$2.0  \$ Vis. 2 \$3.00  \$ Vis. 2 \$3	6 to 7 in. diam., 7 to 20 in. long
914 15 4-20 and is 4-00 and is 4-10 1 20, 4-10 1 20, 4-10 1 1 20, 4-10 1 2 2 4-10 1 2 3 4-10 1 3 4-10 1 3 4-10 1 4 4-10	B Tin Pails, Sec. It is over keep price; Pails, to it is over keep price; Pails, to it is over keep price; assorted, it is, to price it is over keep price; assorted, it is, to price it is the price; bry white Lead in barrels. Red Lead, very brilliant, in keeps, 7c; in the Litharse (Potter's Lead) 7c; "Freights equalized with all points who Lead is made. Terms; Note at sixty days, or if paid with from date of invoice, a discount of 2½ per be allowed, but not otherwise.
and 20. 4-32.  1-32. 1-32.  1-3	Window Glass.  Per Rox of to Fret.—Discount, in small lols, single strength, fosker of double; in car 20 % on single strength, yo i on double.  Single Strength.  Size.  6 x 8 to 10 x 15
3. 11 and 15	11 x 1 4 10 10 x 2 2   0, 2x 8 8,50     15 x 2 6 10 2 1 x 30   16,75 9,75     15 x 3 6 10 2 1 x 30   16,25 9,76     15 x 3 6 10 2 1 x 30   12,25 9,50     15 x 3 6 10 2 1 x 30   12,50 9     15 x 3 6 10 0 5 x 4 4   12,50 9     15 x 3 6 10 0 0 x 5 0   15,50 9     15 x 3 6 10 0 0 x 5 0   15,50 9     15 x 3 6 10 0 0 x 5 0   17,25     15 x 3 6 10 0 0 x 5 0   16,25     17,25 1 5,50 9     17,25 1 5,50 9     17,25 1 5,50 9     18,25 1 7,25 9     18,25 1
extea will be charged for cutting floops singths.  Barrel Hoops. 15 to 2 in., cut to length. set of 6 hoops. \$50 than 9 lbs. per set of 6 hoops. \$50 charges than 9 lbs. per set of 6 hoops. \$50 cutting for Length all Preceding Iron. inding Tire.  Tank Iron.  330	18 x 22 to 20 x 30. 14.50 15.25 15 x 36 to 24 x 30. 17.78 16.78 16.78 15.78 16.78 17.78 16.78 15.78 16.78 15.78 16
\$60 \$\frac{5}{2}\$\$ \$\	de en la la company de la la company de la c
1.10 extin.   1.10 extra   1.10 extra   1.10 extin.   1.10 extra   1	
nch. 33c 254 inch 328 for Flow Handles 36c	(A) 34, 34
ts for 12, 16 and 20-lb. Rail, 40c each; 28 is a cach; 20 ib., too each.	From 5 to 30

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-	Nalls.	-
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	Square, Flat, Octagon and Round. 36 t) 2 inches, inclusive	
	13c 4 and 3/6 to 4 14c 7-32 and 4/8 to 5 15c 3-16 and 5/8 to 6 1.85 1.22 inch.	
	3-16 and 534 to 6 "	
1000	3-10 and 5% to 0   185   5-22 inch.   220   5-42 inch.   230   5-42 inch.   300   5-42	
1		
.	Ordinary Sizes, % to 2 inch  Crucible.  Beasemer & Open Hearth	
	Round	
	s-16 and 214 to 3 inches 9 c 6c 6c 76	
6	Ordinary Sizes, % to 2 inch  Round	
	square, Flat and Octagon, Se extra throughout the list.	1
6	Cut to specified lengths, lee extra.  Hammer Cast Steel.	
	z Inches and under	
	Sheet Steel.—Crucible	
6		i
20 00	To 21 gauge 120 110 30 70 10. extra for each additional gauge. Cut to multiples or specified lengths, lec. extra.	1
5	Miscellaneous Cast Steel.	
6	Auger and Auger Bit. 946	
8	Misscellaneous Cast Steel.  Auger and Auger Bit.  Axie Steel for carringes and wagons  Sige Frog Foints and Plates  Local Pick, plath thoumered  Frog Foints and Plates  Local Pick, plath thoumered  Local Pick, beveled (rolled)  State Signations, beveled (rolled)  State Signations, beveled (rolled)  Signations, beveled  Able Cuttery, plain  Signations, beveled  Cut and Can' Hook.  Signations, beveled  Sign	
1	Pick, plain (hammered)	1
	Skate Steel	
	Table Cutlery, piain	1
	Coal and Granite Wedge	
1	Cota and Grante Wedge. 8.4cc Spindle, subject to Machinery classification 8.4cc Trap Spring Steel Forzed Crank Plas and Lathe Spindles. 11cc Forzed to shapes 15c Gorged to shapes 8.4cc Torzed to shapes 8.4cc	
	Forged Crank Pins and Lathe Spindles	
	forged to shapes	
E E	Stide Bars, plain. Forged to shapes. Side Bars, plain. Side Bars, plain. Side Crucible. Onen Beauth on the	
I.	The Meter of Bessemer,	
5	thick.	
-	thick	
	ately	
	Boller, Fire-Box and Flue Sheets, not less than \$10 office. Boller, Fire-Box and Flue Sheets, not less than \$20 office thick. Circulars and semi-circulars, when ordered separately. Smoke Stack, to shape	
0 0	File Cast Steel. Square, Round, Half Round and Flat Routers	ŀ
e	Square, Round, Half Round and Flat Bastard, 8-inch and over be Mill Saw, 8-theh and over sloce Taper, 3½-inch and over sloce Horse and Shee Rasp.	l
e	Taper, 35-inch and over	į.
e		
e	Spiral and Taper, cut to lengths	1
0 0	1x½ and over     8½e       1x¾-16 and ½.     8½e       1x¾-16 and ½.     66       1 and 13-10x½ and 5-32, ¾x¾-16 and 5-32.     0½e       2 and 9-xx¼ and 3-32 and 12 g     15e       Solid Safe Cast Steel.     8e       Agricultural Instance Costs.     8e	1
	4 and 9x14 and 3-32 and 12 g	1
c	Agricultural Implement Cost Street	l
e	Agricultural Implement Cast Steel. Fork and Rake, Crucibie	
c	Horse Rake Steel, cut to lengths, Crucible	l
c	Beveled Hoe and Shovel Steel in Bars	1
5	Bessemer and Open Hearth.	Г
e	" spiral and taper, cut to lengths	1
e	Toe Calk	١.
C	Plow Hee Axie Billets Hee Sleigh Shoe 40	ł
re le	Cutter Shoe, cut to lengths and tapered	ı
ie ie	Grain Drill Rars	1
	Axie   Billets   4.98     Sleigh Shoe, cut to lengths and tapered   40     Cutter Shoe, cut to lengths and tapered   5.90     Grain   Drill Bans   40     Grain   Drill Bans   40     Rolling Coulter Blanks, cut and punched   5.90     Thrush or Steel   5.90     5.	1
e	Rolling Coulter Blanks, cut and punched	ı
10	TermsFour months; 3 per cent. discount for cash.	1
10	Rolls and Castings.	[
000	Furnace, Floor and Straightening Plates	1
0	Guide Plates Spindles and coupling baxes	1
C	sand Rolls and Pinions, large size 3 C	1
e	Rolling Mill Castings under to the	1
ie i	Spur and Bevel Wheels, large	1
136	over 30 inches.	-
00000	Relis and Castings.  Furnace, Floor and Straightening Plates. Housings and Castings not otherwise specified. 3 c Guide Plates.  Spindles and coupling boxes. Sand itolis and Plnions, large size. 3 c Spindles and coupling boxes.  Sand itolis and Plnions, large size. 3 c Spindles and coupling boxes.  Pipe Mill Castings.  Pipe Mill Castings under 50 lbs. 5 c Spur and Bovel Wheels, large 6 c Spur and Bovel Wheels, large 7 c Spur and Bovel Wheels, large 8 c Spur a	1
NC P	Chilled Re Us.	1
e	5 to 7 in. diam., 7 to 20 in. long	-
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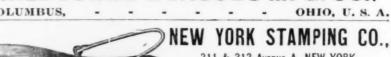
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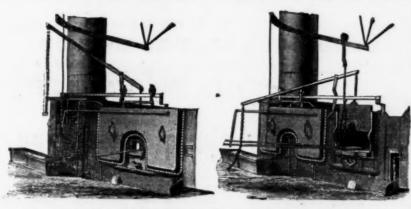
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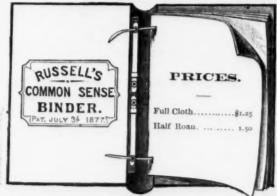
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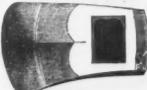
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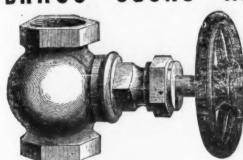
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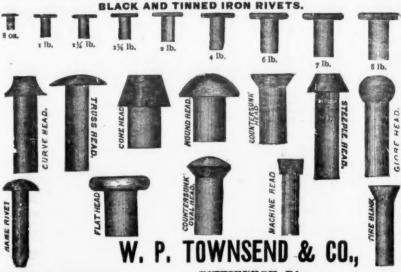
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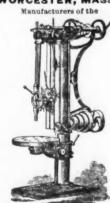


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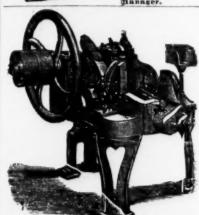
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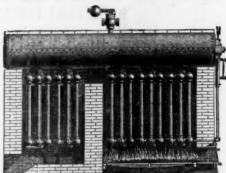
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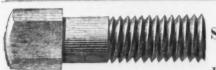
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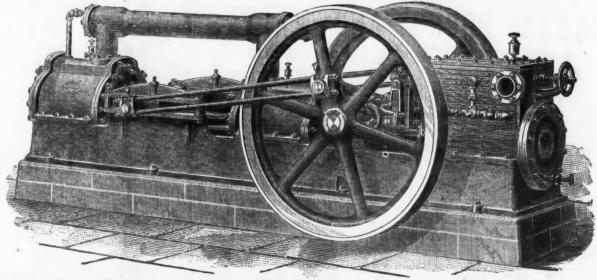
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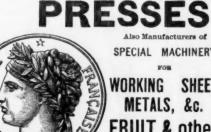
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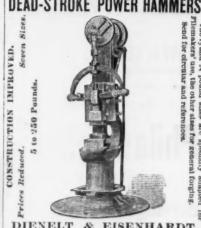
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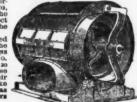
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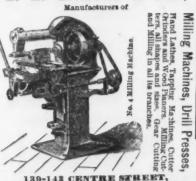
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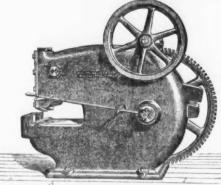
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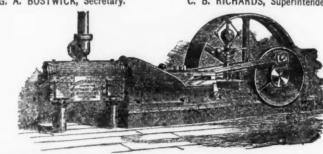
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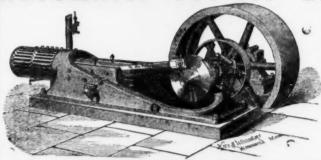
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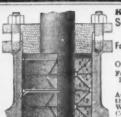
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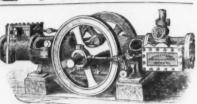
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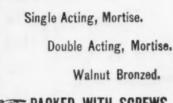
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